

REPORT
OF THE PROCEEDINGS OF THE
TWENTY-SEVENTH MEETING OF THE
CONVENTION OF
AMERICAN INSTRUCTORS
OF THE DEAF

WINNIPEG, MANITOBA, CANADA

JUNE 22 TO 26, 1931



MARCH 2 (calendar day, MARCH 4), 1932.—Referred to the
Committee on Printing

PRESENTED BY MR. HAYDEN

FEBRUARY 28 (calendar day, MARCH 8), 1934.—Referred to the
Committee on Printing

UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON : 1934

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WASHINGTON, D. C.

SUBMITTED BY MR. HAYDEN

IN THE SENATE OF THE UNITED STATES,
March 20 (calendar day, March 23), 1934.

Ordered. That the report of the proceedings of the twenty-seventh meeting of the Convention of American Instructors of the Deaf, held at Winnipeg, Manitoba, Canada, June 22 to June 26, 1931, be printed with illustrations as a Senate document.

Attest:

EDWIN A. HALSEY,
Secretary.

LETTER OF TRANSMITTAL

COLUMBIA INSTITUTION FOR THE DEAF,
Washington, D.C., March 3, 1932.

To the Congress of the United States:

In accordance with the act of incorporation of the Convention of American Instructors of the Deaf, approved January 26, 1897, I have the honor to submit the proceedings of the twenty-seventh meeting of the convention, held at Winnipeg, Manitoba, Canada, June 22 to 26, inclusive.

I have the honor to be, very respectfully, your obedient servant,
PERCIVAL HALL,
President Columbia Institution for the Deaf.

Hon. CHARLES CURTIS,
President of the Senate.

Hon. JOHN N. GARNER,
Speaker of the House.

LETTER OF SUBMITTAL

MARYLAND STATE SCHOOL FOR THE DEAF,
Frederick, Md., March 1, 1932.

PERCIVAL HALL, Litt.D.,
President Columbia Institution for the Deaf,
Washington, D.C.

DEAR SIR: The act of incorporation of the Convention of American Instructors of the Deaf, approved January 26, 1897, requires a report to Congress, through the president of the Columbia Institution for the Deaf, Washington, D.C., "of such portions of its proceedings as its officers shall deem to be of general public interest and value concerning the education of the deaf."

Agreeably to the above request I have the honor to submit herewith a full and complete report, containing such papers and addresses as might be of interest or of historic value, all of which were delivered at the twenty-seventh meeting, held at Winnipeg, Manitoba, Canada, June 22 to 26, 1931.

May I respectfully request that this report be laid before Congress?
Very truly yours,

IGNATIUS BJORLEE,
Secretary Convention of American Instructors of the Deaf.

ACT OF INCORPORATION

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That Edward M. Gallaudet, of Washington, in the District of Columbia; Francis D. Clarke, of Flint, in the State of Michigan; S. Tefft Walker, of Jacksonville, in the State of Illinois; James L. Smith, of Faribault, in the State of Minnesota; Sarah Fuller, of Boston, in the State of Massachusetts; David C. Dudley, of Colorado Springs, in the State of Colorado; and John R. Dobyns, of Jackson, in the State of Mississippi, officers and members of the Convention of American Instructors of the Deaf, and their associates and successors, be, and they are hereby, incorporated and made a body politic and corporate in the District of Columbia by the name of the "Convention of American Instructors of the Deaf", for the promotion of the education of the deaf on the broadest, most advanced, and practical lines, and by that name it may sue and be sued, plead and be impleaded, in any court of law or equity, and may use and have a common seal and change the same at pleasure.

Sec. 2. That the said corporation shall have the power to take and hold personal estate and such real estate as shall be necessary and proper for the promotion of the educational and benevolent purposes of said corporation, which shall not be divided among the members of the corporation, but shall descend to their successors for the promotion of the objects aforesaid.

Sec. 3. That said corporation shall have a constitution and regulations or bylaws and shall have the power to amend the same at pleasure: *Provided*, That such constitution and regulations or bylaws do not conflict with the laws of the United States or of any State.

Sec. 4. That said association may hold its meetings in such places as said incorporators shall determine, and shall report to Congress, through the president of the Columbia Institution for the Deaf and Dumb at Washington, D.C., such portions of its proceedings and transactions as its officers shall deem to be of general public interest and value concerning the education of the deaf.

Approved, January 26, 1897.

MEETINGS OF THE CONVENTION OF AMERICAN INSTRUCTORS OF THE DEAF

- First—New York, N.Y., August 28-30, 1850.
Second—Hartford, Conn., August 27-29, 1851.
Third—Columbus, Ohio, August 10-12, 1853.
Fourth—Staunton, Va., August 13-15, 1856.
Fifth—Jacksonville, Ill., August 10-12, 1858.
Sixth—Washington, D.C., May 12-16, 1868. (Also called the First Conference of Superintendents and Principals of American Schools for the Deaf.)
Seventh—Indianapolis, Ind., August 24-26, 1870.
Eighth—Belleville, Ontario, July 15-20, 1874.
Ninth—Columbus, Ohio, August 17-22, 1878.
Tenth—Jacksonville, Ill., August 26-30, 1882.
Eleventh—Berkeley, Calif., July 15-23, 1886.
Twelfth—New York, N.Y., August 23-27, 1890.
Thirteenth—Chicago, Ill., July 17, 19, 21, 24, 1893.
Fourteenth—Flint, Mich., July 2-8, 1895.
Fifteenth—Columbus, Ohio, July 28-August 2, 1898.
Sixteenth—Buffalo, N.Y., July 2-8, 1901.
Seventeenth—Morganton, N.C., July 8-13, 1905.
Eighteenth—Ogden, Utah, July 4-10, 1908.
Nineteenth—Delavan Wis., July 6-13, 1911.
Twentieth—Staunton, Va., June 25-July 1, 1914.
Twenty-first—Hartford, Conn., June 29-July 3, 1917.
Twenty-second—Mount Airy, Pa., June 28-July 3, 1920.
Twenty-third—Belleville, Ontario, June 25-30, 1923.
Twenty-fourth—Council Bluffs, Iowa, June 29-July 4, 1925.
Twenty-fifth—Columbus, Ohio, June 27-July 1, 1927.
Twenty-sixth—Faribault, Minn., June 17-21, 1929.
Twenty-seventh—Winnipeg, Manitoba, June 22-26, 1931.

**OFFICERS OF THE CONVENTION OF AMERICAN INSTRUCTORS OF
THE DEAF (1931-33), STANDING EXECUTIVE COMMITTEE, AND
OTHER STANDING COMMITTEES**

OFFICERS

President.—Dr. Thomas S. McAloney, Colorado Springs, Colo., superintendent of the Colorado School for Deaf and Blind.

Vice President.—Alvin E. Pope, Trenton, N.J., superintendent of the New Jersey School for the Deaf.

Secretary.—Ignatius BJORLEE, Frederick, Md., superintendent of the Maryland State School for the Deaf.

Treasurer.—Dr. J. Schuyler Long, Council Bluffs, Iowa, principal in the Iowa School for the Deaf.

DIRECTORS

[The directors with the officers, form the standing executive committee]

Thomas Rodwell, Winnipeg, Manitoba, superintendent of the Manitoba School for the Deaf.

Dr. Charles R. Ely, Washington, D.C., vice president of Gallaudet College.

Victor O. Skyberg, Faribault, Minn., superintendent of the Minnesota School for the Deaf.

STANDING COMMITTEES

Art section.—Mrs. Patrick J. Kelly, of Missouri, chairman; Hazel T. Craig, of the District of Columbia; Geneva B. Llewelyn, of Wisconsin; Gertrude A. Warner, of Manitoba.

Kindergarten section.—Margaret C. Smith, of Colorado, chairman; Margaret Scyster, of Illinois; E. Frances Hancock, of New York; Josephine F. Quinn, of Minnesota; Catherine Ford, of Ontario.

Normal section.—E. A. Stevenson, of California, chairman; Mrs. H. T. Poore, of Tennessee; Dr. Percival Hall, of the District of Columbia; A. C. Manning, of Pennsylvania; A. P. Buchanan, of Texas; H. B. Fetterly, of Ontario.

Auricular section.—Mrs. Rachel D. Davies, of Pennsylvania, chairman; Marshall Hester, of Iowa; Glenn I. Harris, of Colorado; Margaret S. Kent, of Maryland; L. R. Divine, of Louisiana; George Bateman, of Nova Scotia.

Oral section.—Mary D. Cason, of Maryland, chairman; Pearl Herdman, of Missouri; Marion H. Lamb, of Pennsylvania; E. R. Abernathy, of Ohio; Sam B. Craig, of the District of Columbia; Edwin G. Peterson, of Saskatchewan.

Vocational section.—Tom L. Anderson, of Iowa, chairman; Bess M. Riggs, of Arkansas; A. L. Brown, of Florida; John E. Travis, of Indiana; H. J. Menzemer, of Kansas; Dean Tomlinson, of Manitoba.

Eastern section.—Alvin E. Pope, of New Jersey, chairman; Dr. E. A. Gruver, of Pennsylvania; Dr. Harris Taylor, of New York.

Southern section.—E. McK. Goodwin, of North Carolina, chairman; A. J. Caldwell, of Louisiana; Madison J. Lee, of Kentucky.

Western section.—Clarence J. Settles, of Idaho, chairman; Lyman Steed, of Oregon; Burton W. Driggs, of North Dakota.

OFFICERS OF THE CONVENTION, 1929-31

President.—Dr. Elbert A. Gruver, Philadelphia, Pa., superintendent of the Pennsylvania Institution for the Deaf.

Vice president.—Dr. Thomas S. McAloney, Colorado Springs, Colo., superintendent of the Colorado School for Deaf and Blind.

Secretary.—Ignatius BJORLEE, Frederick, Md., superintendent of the Maryland State School for the Deaf.

Treasurer.—Dr. J. Schuyler Long, Council Bluffs, Iowa, principal in the Iowa School for the Deaf.

DIRECTORS

[The directors, with the officers, form the standing executive committee]

Dr. W. Laurens Walker, Cedar Spring, S.C., superintendent of the South Carolina School for the Deaf.

Dr. Charles R. Ely, Washington, D.C., vice president of Gallaudet College.

Howard M. McManaway, Staunton, Va., superintendent of the Virginia School for the Deaf.

ACTIVE MEMBERS

LIFE MEMBERS

Humbert, Mrs. L. A., Gary, S.Dak.

Larson, Lars M., Faribault, Minn.

MEMBERS

- Abernathy, E. R., Columbus, Ohio.
 Adams, Mabel E., Dorchester, Mass.
 Anderson, Mrs. Effie W., Council Bluffs, Iowa.
 Anderson, Jane, Montreal, Quebec.
 Anderson, T. L., Council Bluffs, Iowa.
 Armitage, W. Dorothy, Vancouver, British Columbia.
 Atkinson, Mary B., West Hartford, Conn.
 Ayers, Kreigh B., Akron, Ohio.
 Aylen, Ethelwyn D., Halifax, Nova Scotia.
 Baker, Frances, Devils Lake, N.Dak.
 Bass, R. Amon, Staunton, Va.
 Bass, Mrs. R. Amon, Staunton, Va.
 Bateman, George, Halifax, Nova Scotia.
 Barefoot, Viola, Norwood, Minn.
 Bender, Harriett, Council Bluffs, Iowa.
 Benedict, Martha E., Belleville, Ontario.
 Berry, Amelia E., New York, N.Y.
 Betts, Otis A., Rome, N.Y.
 Betts, Mrs. Otis A., Rome, N.Y.
 Birck, Mrs. Ruth K., Berkeley, Calif.
 Birck, Vernon S., Berkeley, Calif.
 BJORLEE, Ignatius, Frederick, Md.
 Blanchard, M. S., Belleville, Ontario.
 Blanchard, Mrs. M. S., Belleville, Ontario.
 Blattner, J. W., Sulphur, Okla.
 Blaxall, A. W., Cape Town, South Africa.
 Boatwright, John T., Faribault, Minn.
 Boatwright, Mrs. J. T., Faribault, Minn.
 Booth, F. W., Omaha, Nebr.
 Bowman, Bertha, Winnipeg, Manitoba.
 Breaky, Margaret R., Devils Lake, N.Dak.
 Brown, Alfred L., St. Augustine, Fla.
 Brown, Harry B., Philadelphia, Pa.
 Bruns, Henry E., Berkeley, Calif.
 Buchanan, Arthur P., Austin, Tex.
 Buell, Edith M., New York, N.Y.
 Burns, Byron B., Sioux Falls, S.Dak.
 Burns, Louis, Devils Lake, N.Dak.
 Burns, Mary, Winnipeg, Manitoba.
 Burns, S. Robey, Jacksonville, Ill.
- Byram, Myrtle E., Winnipeg, Manitoba.
 Caldwell, A. J., Baton Rouge, La.
 Campbell, Mrs. Mabel M., Indianapolis, Ind.
 Campbell, Marjorie, Halifax, Nova Scotia.
 Cape, Mrs. Louise, Sulphur, Okla.
 Carter, Maud, Olathe, Kans.
 Casey, Miss M., Winnipeg, Manitoba.
 Cason, Mary D., Frederick, Md.
 Cass, Mabel I., Belleville, Ontario.
 Cheek, Wilhelmina, Jacksonville, Ill.
 Clare, Arthur J., Belleville, Ontario.
 Clark, Barton I., Cave Spring, Ga.
 Cleary, E. P., Jacksonville, Ill.
 Cleary, Mrs. E. P., Jacksonville, Ill.
 Cloud, Dan T., Jacksonville, Ill.
 Cobb, Florence M., Jacksonville, Ill.
 Comp, Evelyn, Olathe, Kans.
 Connery, Julia M., St. Louis, Mo.
 Cook, Anna L., Winnipeg, Manitoba.
 Cooper, Mrs. May B., Oakland, Calif.
 Cowan, Mary Ella, Indianapolis, Ind.
 Craig, Hazel T., Washington, D.C.
 Craig, Sam B., Washington, D.C.
 Crandall, Laura R., Jacksonville, Ill.
 Crummack, Alice L., Winnipeg, Manitoba.
 Cuthbert, Alice, Winnipeg, Manitoba.
 Cuthbertson, Ethel, Halifax, Nova Scotia.
 Cutshaw, Ursula, Jackson, Miss.
 Dailey, Helen, Grant Town, W.Va.
 Daily, Katherine, Belleville, Ontario.
 Daniel, Elizabeth, Romney, W.Va.
 Darnold, Mrs. Ethel, Winnipeg, Manitoba.
 Davies, Everett, Pittsburgh, Pa.
 Davies, Mrs. Rachel Dawes, Pittsburgh, Pa.
 Day, Herbert E., Fulton, Mo.
 Deannard, Elizabeth, Belleville, Ontario.
 DeBerry, Parley, Romney, W.Va.
 Deem, Hattie L., St. Louis, Mo.
 DeMotte, Amelia, Jacksonville, Ill.
 Divine, Hope, Mystic, Conn.
 Divine, Louis R., Baton Rouge, La.
 Driggs, Burton W., Devils Lake, N.Dak.

- Eldred, Esme E., Winnipeg, Manitoba.
 Elliott, Mrs. Ida Donald, Colorado Springs, Colo.
 Elstad, Leonard M., New York, N.Y.
 Ely, Charles R., Washington, D.C.
 Ely, Grace, Washington, D.C.
 Emerson, Grace M., Albany, N.Y.
 Fagan, Rose, Brooklyn, N.Y.
 Fancher, Fred G., Jacksonville, Ill.
 Fay, Helen, Washington, D.C.
 Fearon, Margaret J., Halifax, Nova Scotia.
 Fetterly, H. B., Belleville, Ontario.
 Fink, Thirza, Faribault, Minn.
 Fitzgerald, Edith, Staunton, Va.
 Ford, Catherine, Belleville, Ontario.
 Forrester, T. C., Rochester, N.Y.
 Fox, Thomas Francis, New York, N.Y.
 Fridge, Mrs. Alice, Jackson, Miss.
 Fusfeld, Irving S., Washington, D.C.
 Gale, Antoinette, Frederick, Md.
 Gale, Dorothy F., Frederick, Md.
 Gardner, Isaac B., New York, N.Y.
 Gildea, Marie, Pittsburgh, Pa.
 Gillis, Lena, Winnipeg, Manitoba.
 Gooch, Fleecy, Olathe, Kans.
 Goodwin, E. McK., Morganton, N.C.
 Gordon, S. Alec, Belleville, Ontario.
 Granger, Audria J., Faribault, Minn.
 Gray, Mabel H., Northampton, Mass.
 Greener, A. B., Columbus, Ohio.
 Gruber, E. A., Philadelphia, Pa.
 Hall, Percival, Washington, D.C.
 Hamilton, Ida, Staunton, Va.
 Hammer, Helen L., Chicago, Ill.
 Hancock, E. Frances, New York, N.Y.
 Handley, Viola G., Belleville, Ontario.
 Harris, Glenn L., Colorado Springs, Colo.
 Harwood, Viola, Devils Lake, N.Dak.
 Hauberg, Margaret, Little Rock, Ark.
 Herdman, Pearl, St. Louis, Mo.
 Herring, Elizabeth, Faribault, Minn.
 Hester, Marshall S., Council Bluffs, Iowa.
 Hester, Mrs. M. S., Council Bluffs, Iowa.
 Hicks, Miss Jerome, Baton Rouge, La.
 Hill, Anna Tuttle, Sulphur, Okla.
 Hill, Mrs. Mary E., Omaha, Nebr.
 Hobart, Miss Marvel C., Delavan, Wis.
 Hodgson, E. A., New York, N.Y.
 Holmes, Hazel Mere, Council Bluffs, Iowa.
 Holt, Alice M., St. Louis, Mo.
 Hopper, Eunice, Jacksonville, Ill.
 Howard, Belle, Jacksonville, Ill.
 Howes, Esther C., Chicago, Ill.
 Howson, J. W., Berkeley, Calif.
 Hudson, Fern, Austin, Tex.
 Hurd, Anna C., Providence, R.I.
 Hurt, Mildred, Little Rock, Ark.
 Inrster, Miss I., Winnipeg, Manitoba.
 Jensen, Adela G., Providence, R.I.
 Johnson, W. E., Little Rock, Ark.
- Johnson, William A., Jacksonville, Ill.
 Kelly, Margaret, Berkeley, Calif.
 Kelly, Patrick J., Fulton, Mo.
 Kelly, Mrs. Patrick J., Fulton, Mo.
 Kent, Margaret S., Frederick, Md.
 Lahn, Nathan, Fulton, Mo.
 Lally, Edward B., Belleville, Ontario.
 Lally, Margaret, Belleville, Ontario.
 Lamb, Marion H., Philadelphia, Pa.
 Le Couteulx St. Mary's School, Buffalo, N.Y.
 Lee, Madison J., Danville, Ky.
 Leeper, Mrs. Fred M., Jacksonville, Ill.
 Leonard, Bessie N., Northampton, Mass.
 Llewellyn, Mrs. Geneva B., Delavan, Wis.
 Long, J. Schuyler, Council Bluffs, Iowa.
 Long, Littleton A., Devils Lake, N.Dak.
 Lonsdale, Mary H., Winnipeg, Manitoba.
 McAloney, Thos. S., Colorado Springs, Colo.
 McBeath, Lyda, Winnipeg, Manitoba.
 McCanner, Hazel, Frederick, Md.
 McClure, Mrs. Mary H., Fulton, Mo.
 McConnell, Eugene, Council Bluffs, Iowa.
 McCraskill, J. W., Melbourne, Australia.
 McDonald, A. H., Winnipeg, Manitoba.
 McIntire, O. L., Council Bluffs, Iowa.
 Macphail, Mrs. Candace J., Winnipeg, Manitoba.
 Macphail, Helen E., Winnipeg, Manitoba.
 Manning, A. C., Pittsburgh, Pa.
 Marbut, Musa, West Trenton, N.J.
 Marler, Pauline, Jackson, Miss.
 Marsh, Rose, Columbus, Ohio.
 Marshall, Charles C., Jacksonville, Ill.
 Martin, Esther K., Berkeley, Calif.
 Mason, Marie K., Columbus, Ohio.
 Menzemer, H. J., Olathe, Kans.
 Miller, Hanna, New York, N.Y.
 Miller, Lucinda K., Washington, D.C.
 Moeller, Margaret, Devils Lake, N. Dak.
 Molohon, Ruby, Colorado Springs, Colo.
 Moore, Lucile M., St. Augustine, Fla.
 Mudgett, David, Jacksonville, Ill.
 Murphy, Fred R., Kansas City, Mo.
 Myers, Doris, Pittsburgh, Pa.
 Myers, Mrs. Maggie, Little Rock, Ark.
 Newlee, Clara, Chicago, Ill.
 Noland, Kathleen E., Frederick, Md.
 Numbers, F. C., Jr., Baton Rouge, La.
 Numbers, Mrs. Leona P., Baton Rouge, La.
 Numbers, Mary E., Northampton, Mass.
 Nurse, Ethel M., Belleville, Ontario.
 Oaks, Marcene, Faribault, Minn.

OFFICERS

O'Brien, Loretta, North Platte, Nebr.
 O'Connell, Catherine, Belleville, Ontario.
 O'Connor, Clarence D., New York, N.Y.
 O'Hara, Juanita I., New York, N.Y.
 Olsen, Gladys, Berkeley, Calif.
 Orman, James N., Jacksonville, Ill.
 Page, Helen, Minneapolis, Minn.
 Patterson, Alpha W., Berkeley, Calif.
 Paulson, Esther M., Saskatoon, Saskatchewan.
 Pence, Helen W., Fulton, Mo.
 Peterson, Martha, Faribault, Minn.
 Peterson, P. N., Faribault, Minn.
 Pittenger, O. M., Indianapolis, Ind.
 Pittenger, Mrs. O. M., Indianapolis, Ind.
 Plouer, Alice M., Jacksonville, Ill.
 Poore, Mrs. H. T., Knoxville, Tenn.
 Pope, Alvin E., West Trenton, N.J.
 Proctor, Maggie Neal, Knoxville, Tenn.
 Quinn, Josephine F., Faribault, Minn.
 Rankin, Jean, Mystic, Conn.
 Reardon, Gertrude, Devils Lake, N. Dak.
 Reeder, Dwight W., West Trenton, N.J.
 Reising, John L., Faribault, Minn.
 Rhodes, Elizabeth K., Winnipeg, Manitoba.
 Riggs, Bess M., Little Rock, Ark.
 Riggs, Lucille, Jacksonville, Ill.
 Rodwell, Thomas, Winnipeg, Manitoba.
 Roper, Annie M., St. Louis, Mo.
 Roth, L. A., Faribault, Minn.
 Runde, Winfield S., Oakland, Calif.
 Russel, Catherine, Jacksonville, Ill.
 Russel, Margaret, Jacksonville, Ill.
 Russell, Mary Scott, Baton Rouge, La.
 Scarborough, Ida, Council Bluffs, Iowa
 Schmidt, Pauline, Cave Spring, Ga.
 Schoneman, Fred W., Jacksonville, Ill.
 Schwirz, John, Faribault, Minn.
 Scyster, Margaret, Jacksonville, Ill.
 Sensenig, Barton, Philadelphia, Pa.
 Serumgard, Inez, Devils Lake, N.Dak.
 Settles, Clarence J., Gooding, Idaho.
 Sheridan, Thomas, Devils Lake, N.Dak.
 Simpson, R. C., Winnipeg, Manitoba.

HONORARY

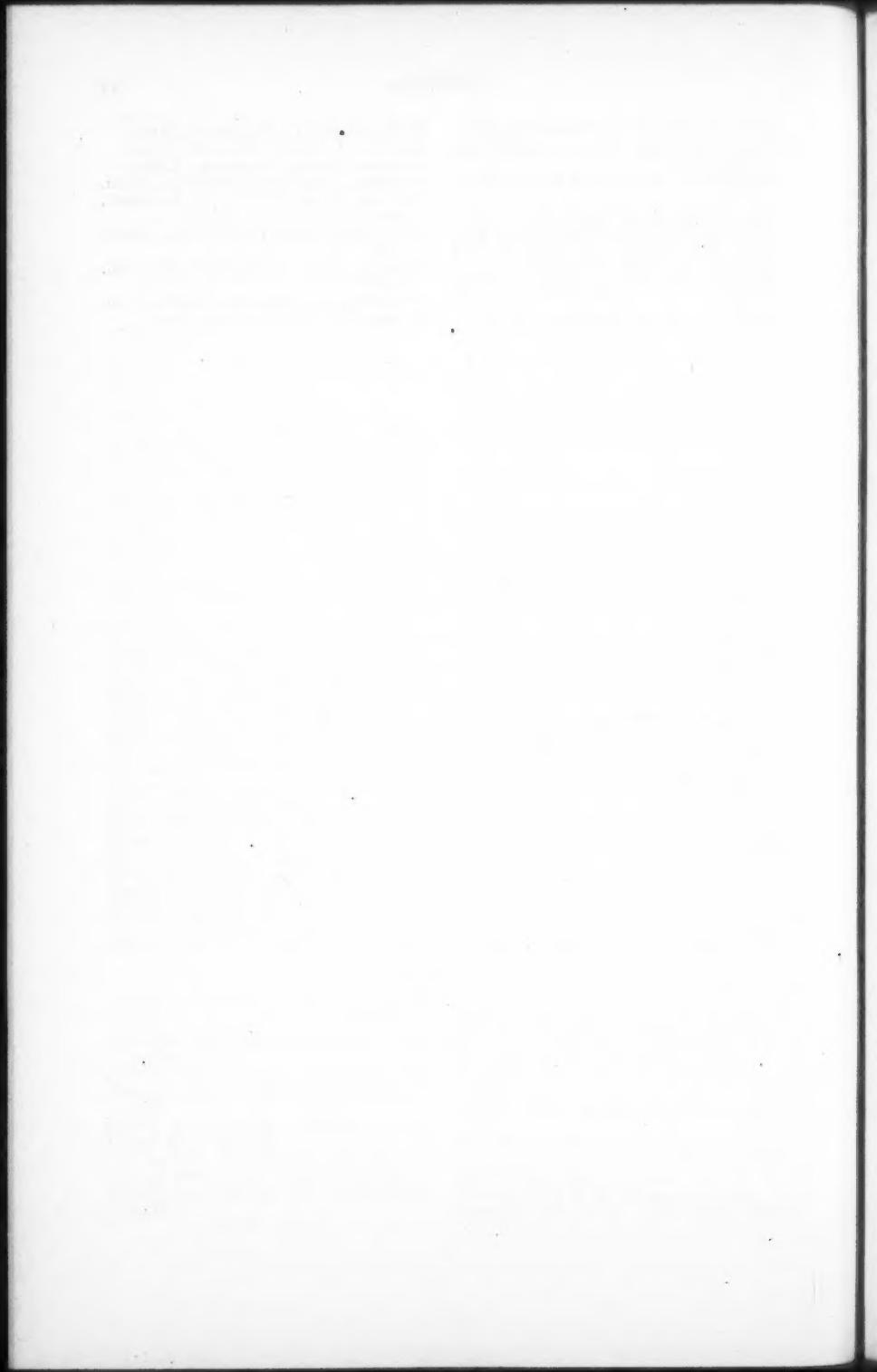
Adamson, Mrs. A. J., Winnipeg, Manitoba.
 Bateman, Mrs. George, Halifax, Nova Scotia.
 Bjorlee, Mrs. Ignatius, Frederick, Md.
 Bonnell, Rev. J. S., Winnipeg, Manitoba.
 Cloud, Mrs. Dan T., Jacksonville, Ill.
 Comp, Mrs. Charles, Omaha, Nebr.
 Curtis, John W., Minneapolis, Minn.
 Divine, Mrs. L. A., Baton Rouge, La.
 Driggs, Mrs. Burton W., Devils Lake, N.Dak.

Skinner, Mrs. Lucretia, Council Bluffs, Iowa.
 Skyberg, Victor O., Faribault, Minn.
 Smith, Margaret C., Colorado Springs, Colo.
 Snyder, H. D., Jacksonville, Ill.
 Sollberger, Emma, Jacksonville, Ill.
 Steed, J. Lyman, Salem, Oreg.
 Stevenson, E. A., Berkeley, Calif.
 Stewart, Peter D., Winnipeg, Manitoba.
 Stinson, Kathleen, Saskatoon, Saskatchewan.
 Stone, J. H., Jackson, Miss.
 Stovall, Sadie, Jackson, Miss.
 Stratton, A. C., Belleville, Ontario.
 Taylor, Elizabeth R., Portland, Maine.
 Taylor, Harris, New York, N.Y.
 Teuma, Emilio, Habana, Cuba.
 Tillinghast, E. S., Sioux Falls, S.Dak.
 Timberlake, Josephine B., Washington, D.C.
 Tomlinson, Dean E., Winnipeg, Manitoba.
 Totten, Mae, Belleville, Ontario.
 Towler, Mary K., Faribault, Minn.
 Travis, John E., Indianapolis, Ind.
 Tucker, Walter J., Mystic, Conn.
 Tucker, Mrs. Walter J., Mystic, Conn.
 Turner, Mrs. Mabel A., Council Bluffs, Iowa.
 Vandegrift, Edith, Faribault, Minn.
 Veitch, Evelyn M., Vancouver, Wash.
 Walker, Julia A., Green Bay, Wis.
 Wannamaker, Mrs. A., Belleville, Ontario.
 Ward, Lavilla A., Madison, Wis.
 Welsh, Eugenia T., Providence, R.I.
 Wheeler, F. R., West Hartford, Conn.
 Whildin, Olive A., Baltimore, Md.
 Wilcoxson, Florence, Council Bluffs, Iowa.
 Williams, Eva., Jacksonville, Ill.
 Williamson, Julia M., Council Bluffs, Iowa.
 Wolke, Mary, Jacksonville, Ill.
 Woodbury, Max W., Ogden, Utah.
 Wooldslayer, Mary, Danville, Ill.
 Worthington, Olive, Columbus, Ohio.
 Wright, John D., Santa Barbara, Calif.

MEMBERS

Fink, Mattie, Faribault, Minn.
 Fletcher, Robert, Winnipeg, Manitoba.
 Forrester, Mrs. T. C., Rochester, N.Y.
 Gemmill, W. H., Des Moines, Iowa.
 Gemmill, Mrs. W. H., Des Moines, Iowa.
 Gruver, Mrs. Margaret, Philadelphia, Pa.
 Harris, Mrs. Glenn I., Colorado Springs, Colo.
 Hill, Joseph, Omaha, Nebr.
 Howson, Mrs. J. W., Berkeley, Calif.
 Johnson, Mrs. W. E., Little Rock, Ark.

- Manning, Mrs. A. C., Pittsburgh, Pa.
Matheson, His Grace, Archbishop,
Manitoba.
McKillican, Dean W., Winnipeg, Mani-
toba.
Meyer, Max F., St. Louis, Mo.
Munhall, Elizabeth, Philadelphia, Pa.
Pope, Mrs. Alvin E., West Trenton, N.J.
Riggs, R. L., Little Rock, Ark.
Rodwell, Mrs. Mary, Winnipeg, Mani-
toba.
Roth, Mrs. L. A., Faribault, Minn.
Roth, Stanley D., Faribault, Minn.
Russell, G. Oscar, Columbus, Ohio.
Sauvain, Nelson, Bismarck, N.Dak.
Schwartz, Mrs. John, Faribault, Minn.
Skyberg, Mrs. Victor O., Faribault,
Minn.
Webb, Hon. Ralph H., Winnipeg, Mani-
toba.
Wheeler, Mrs. F. R., West Hartford,
Conn.
Woodbury, Mrs. Max W., Odgen, Utah.
Zieske, Clara A., Mankato, Minn.



CONSTITUTION OF THE CONVENTION OF AMERICAN INSTRUCTORS OF THE DEAF

ARTICLE I—NAME

This association shall be called the Convention of American Instructors of the Deaf.

ARTICLE II—OBJECTS

The objects of this association shall be:

First. To secure the harmonious union, in one organization, of all persons actually engaged in educating the deaf in America.

Second. To provide for general and local meetings of such persons from time to time, with a view of affording opportunities for a free interchange of views concerning methods and means of educating the deaf.

Third. To promote, by the publication of reports, essays, and other writings, the education of the deaf on the broadest, most advanced, and practical lines, in harmony with the sentiments and practice suggested by the following preamble and resolutions unanimously adopted by the convention in 1886 at a meeting held in Berkeley, Calif.:

"Whereas the experience of many years in the instruction of the deaf has plainly shown that among the members of this class of persons great differences exist in mental and physical conditions and in capacity for improvement, making results easily possible in certain cases which are practically and sometimes actually unattainable in others, these differences suggesting widely different treatment with different individuals: It is therefore

"Resolved, That the system of instruction existing at present in America commends itself to the world, for the reason that its tendency is to include all known methods and expedients which have been found to be of value in the education of the deaf, while it allows diversity and independence of action and work at the same time, harmoniously aiming at the attainment of an object common to all.

"Resolved, That earnest and persistent endeavors should be made in every school for the deaf to teach every pupil to speak and read from the lips, and that such efforts should be abandoned only when it is plainly evident that the measure of success attained does not justify the necessary amount of labor: *Provided*, That the children who are given to articulation teachers for trial should be given to teachers who are trained for the work, and not to novices, before saying that it is a failure: *And provided*, That a general test be made and that those who are found to have sufficient hearing to distinguish sounds shall be instructed aurally."

Fourth. As an association to stand committed to no particular theory, method, or system, and adopting as its guide the following motto: "Any method for good results; all methods, and wedded to none."

ARTICLE III—MEMBERS

SECTION 1. All persons actively engaged in the education of the deaf may enjoy all the rights and privileges of membership in the association on payment of the prescribed fees and agreeing to this constitution.

Sec. 2. Eligibility of applicants is to be determined by the standing executive committee and reported to the convention.

Sec. 3. Any person may become an honorary member of the association, enjoying all the rights and privileges of membership, except those of voting and holding office, on being elected by vote of the association.

Sec. 4. Each person joining the association shall pay a fee of \$3 for the first year and \$1 annually thereafter.

Sec. 5. There shall be in addition a registration fee of \$1 for each person registered at each regular meeting.

SEC. 6. Any member of the association desiring to commute the annual dues into single payment for life shall be constituted a life member on the payment of \$20.

SEC. 7. Applications for membership must be made to the treasurer, who will receive all membership fees and dues. All privileges of membership are forfeited by the nonpayment of dues.

ARTICLE IV—OFFICERS

SECTION 1. At each general meeting of the association there shall be elected by ballot a president, vice president, secretary, treasurer, and three directors, these seven persons forming the standing executive committee of the convention. They shall continue in office until their successors are elected, and shall have power to fill vacancies occurring in their body between general meetings.

SEC. 2. There shall also be elected by ballot at each general meeting of the association nine chairmen of committees, as follows: One for a normal section, one for an industrial section, one for an oral section, one for an art section, one for an auricular section, one for a kindergarten section, one for an eastern local committee, one for a western local committee, and one for a southern local committee. Before the adjournment of each general meeting, or immediately thereafter, the standing executive committee and the nine elected committee chairmen, acting together, shall elect four persons to membership in each of the nine committees herein provided for.

SEC. 3. The general management of the affairs of the association shall be in the hands of the standing executive committee, subject to the provisions of such bylaws as the association shall see fit to adopt.

SEC. 4. All officers and members of committees must be active members of the association in regular standing.

SEC. 5. The standing executive committee shall make a full report at each general meeting of all the operations of the association, including receipts and disbursements of funds, since the preceding meeting.

ARTICLE V—MEETINGS

SECTION 1. General meetings of the association shall be held biennially, but the standing executive committee may call other general meetings at their discretion.

SEC. 2. Local meetings may be convened as the standing executive committee and the committees on local meetings shall determine.

SEC. 3. Proxies shall not be used at any meeting of the association, but they may be used in committee meetings.

SEC. 4. Notice of general meetings shall be given at least four months in advance and notice of local meetings at least two months in advance.

SEC. 5. The business of the association shall be transacted only at general meetings, and at such meetings 100 voting members of the association must be present to constitute a quorum.

ARTICLE VI

In the first election of officers held under the provisions of this constitution, said election occurring immediately after its adoption, all duly accredited active members of the Fourteenth Convention of American Instructors of the Deaf shall be entitled to vote; said members making payment of their membership fees to the treasurer at the earliest practicable opportunity after he shall have been elected.

ARTICLE VII—AMENDMENTS

This constitution may be amended by an affirmative vote of two thirds of the members present at any general meeting of the association: *Provided*, That at such meetings at least 150 voting members of the association shall be present.

ARTICLE VIII

Devises and bequests may be worded as follows: "I give, devise, and bequeath to the Convention of American Instructors of the Deaf, for the promotion of the cause of the education of the deaf, in such manner as the standing executive committee thereof may direct", etc.; and if there be any conditions, add "subject only to the following conditions, to wit: —".

**REPORT
OF THE
PROCEEDINGS
OF THE**

TWENTY-SEVENTH MEETING OF THE CONVENTION OF AMERICAN INSTRUCTORS OF THE DEAF

WINNIPEG, MANITOBA, CANADA, JUNE 22-26, 1931

FIRST DAY, MONDAY, JUNE 22, 1931

PROGRAM

Opening session, Dr. Elbert A. Gruver, presiding.
Appointment of committee of interpreters.

Invocation by His Grace Archbishop Matheson.

Addressers of welcome: Dr. Robert Fletcher, deputy minister of education, Manitoba; Dean W. McKilligan, Manitoba Agricultural College; and Supt. Thomas Rodwell, Manitoba School for the Deaf.

Response: Dr. Percival Hall, Washington, D.C.; and Supt. T. C. Forrester, Rochester School, Rochester, N.Y.

Address of the president of the convention, Dr. Elbert A. Gruver, Mount Airy, Pa.

Announcements and miscellaneous business.

EVENING SESSION

The convention was called to order in the auditorium of the Manitoba Agricultural College, Winnipeg, Manitoba, at 8 p.m., by Dr. Elbert A. Gruver, superintendent of the Pennsylvania Institution, president.

After a committee of interpreters to serve for the convention week had been appointed, invocation was offered by His Grace Archbishop Matheson.

Dr. Gruver introduced Dr. Robert Fletcher, deputy minister of education of the Province of Manitoba, who welcomed the convention in the following address:

GREETINGS BY DR. ROBERT FLETCHER, DEPUTY MINISTER OF EDUCATION

Dr. FLETCHER. Mr. Chairman, your grace, ladies and gentlemen, I am very sorry that my minister, the Honorable Mr. Hoey, has been prevented from being with you this evening. I am very proud of my minister. I would like you to have had the opportunity, not only of hearing him, but of seeing him. He is an Irishman, born and educated in Ireland and has a good deal of that quiet humor

and ready wit which we usually associate with the Irish. Unfortunately, departmental business has called him to Ottawa, and he could not be here. I wish, on his behalf, on behalf of our department of education, and on behalf of the provincial Government, to tender you a very cordial welcome to the Province of Manitoba and to the city of Winnipeg.

We were delighted when Superintendent Rodwell told us there was a possibility that we might secure this convention for Winnipeg. There was the problem, of course, of providing suitable housing accommodation, and our school for the deaf stops short at that one very essential point. If we had been able to carry out our original plans in detail we should have had the accommodation for you over there. As it is, when you see the plant, you will see that we have spent a good deal of money and, insofar as we have gone, we have provided a very fine plant and equipment for the work which the school is designed to do.

We were fortunate in that the convention comes here at a time when this building is not being used. It is sort of in between seasons. The college classes have gone out and the summer classes have not yet come in. They will be here in the course of another 10 days. Dean McKillican, the head of the college, was kind enough to make arrangements for the convention to have its headquarters here. We appreciate, of course, what it means to you to be housed together, because the great value of a convention lies in those intimate associations, those personal contacts, that you are able to make and which could not be made to such advantage if you were scattered in your habitations.

We trust it will not be the last time you will visit Winnipeg. Of course, we cannot expect you to come back here in 2 years, but in the not too distant future we hope we will again be favored with the gathering of your association here in Winnipeg. I hope before the week is over to have the pleasure of meeting numbers of you and getting a little better acquainted with you. The school for the deaf, as you know, is directly under the care of our department, so that I am associated with it, although I leave the worries of it to Superintendent Rodwell. He has to come to me and discuss budgets. Outside of that, the problems are his; but if anything goes wrong with the institution, then I, perhaps more than any other man in the province, would have to take some share of the blame. So the relations between myself and the school are, after all, fairly intimate.

As I said before, we are very glad to welcome you here. We hope you will enjoy your visit. We trust the weather man will be on his good behavior, although we won't object if he does give us a shower of rain during this week, as that would help to wash down some of the dust that has been blowing about recently.

(Dean W. McKillican, president of the Manitoba Agricultural College, also spoke, offering a cordial welcome to the convention in placing the college and its beautiful campus at its disposal.)

Dr. GRUVER. It is not necessary to take much time to introduce the next speaker. We all know Mr. Thomas Rodwell, and he is now to give us a few words of welcome to his school and to the city of Winnipeg.

ADDRESS OF WELCOME

[By Supt. Thomas Rodwell, Manitoba School]

Mr. RODWELL. Mr. President, your Grace, fellow teachers, it gives me particular pleasure to welcome you to the city of Winnipeg. I have attended many conventions, and, east, west, and south; invariably I have met with kindness and hospitality, so much so that it has long been my wish to have the convention come to Winnipeg. I must admit that I entered into the business light-heartedly and I think that the president, who knows what it means to entertain a convention, will smile. I have been reminded lately of the man who got married and after a few short weeks, disillusioned, went back to the minister who had performed the ceremony and asked for a divorce. "But", said the minister, "you know you took her for better or worse." "Yes", said the man, "but she is worse than I took her for." Well, I feel rather that way with this convention.

It was our wish to have the convention at the school, but we found that was impossible and we had to fall back on this college. It is not so very inappropriate, however, because this college for 5 years during the war and after was the home of the school for the deaf.

Now, in taking over an institution of this kind that does not belong to us there is, perhaps, a little danger of friction, but I wish to express now my appreciation of Dean McKillican's kindness and helpfulness in cooperating with us in making arrangements for this convention. And, after all, the arrangement has this advantage—if you find anything that you don't like, you will naturally blame Dean McKillican; but every time you see something that wins your approval, being people of judgment and understanding, you will say, "Rodwell certainly knows how to handle a convention."

I will not keep you any longer; there are others to speak, but I do want to say how delighted we are to have you here and we hope that your stay will be an enjoyable one and that you will go away feeling that the week has been well spent.

Dr. GRUVER. I shall now call upon Dr. Percival Hall, president of Gallaudet College, to respond to these delightful addresses of welcome.

RESPONSE TO WELCOME

[Dr. Percival Hall, Gallaudet College, Washington, D.C.]

Mr. President, Your Grace, ladies and gentlemen, I feel highly honored in being called on to respond to the hearty welcome given us by our friends to the north of the invisible border between our two great Nations. There are many ties besides that of our common profession which bind us together. Ties of tradition, ties of custom, ties of law, as well as ties of language and blood relationship, make us brothers and sisters, or at least cousins. There are other ties which bind me personally still more closely to Canada, and particularly to this school. One of these is the fact that Mrs. Hall was one of the pupils of your former superintendent, Dr. McDermid, who made a fine record in this school many years ago as a wise, kindly, and successful administrator. Another very personal tie comes from the fact that graduates of Gallaudet College have been successful

instructors in this school for many years. I am very happy to say also that there is a close relationship between the institution I represent, Gallaudet College, and the schools for the deaf in Canada. The new superintendent of your Saskatchewan School is one of our normals. Twenty-four of your young men and women have been students at Gallaudet College. Three of them now are on our rolls and are doing excellent work. Our graduates have returned to your country and won success as farmers, business men, chemists, teachers, and heads of prosperous households.

We have held successful meetings in past times at your beautiful Belleville School in Ontario. Our welcome here in Winnipeg has been most gratifying. We are looking forward to a successful meeting of our Convention of American Instructors of the Deaf. In the name of these friends and relatives from across the border I wish to thank you for the cordial reception which we have had at your hands and for the splendid opportunity you have offered us to take counsel together for the benefit of the deaf children of both our Nations.

Dr. GRUVER. Mr. T. C. Forrester, superintendent of the Rochester School, has also had close associations with the school in Winnipeg and others in Canada, and I shall now call upon him to respond.

Mr. FORRESTER. Mr. President, Your Grace, Dr. Fletcher, Superintendent Rodwell, I, also, thank you most heartily for your very gracious and cordial welcome. Dr. Fletcher hoped we would come again. I fear, Doctor, we will.

It was said of old, "No man can live unto himself." That is also true of nations and I think we are beginning to realize that more and more. We have come here to get ideas; we have come here to exchange ideas. Happily, there is no barrier to this exchange.

We are pleased to be in Manitoba. Manitoba has played no mean part in the development of this Dominion, right from the earliest days of the settlement of the Hudson's Bay Co. down to the present. Men of faith, daring, and enterprise came into this Province in the early days and they played their part, played it heroically. I was most interested and pleased to learn tonight that His Grace is descended from some of the settlers that came with Lord Selkirk. That was an ill-fated expedition, but whatever may have become of it we have one product of which we are proud and for which we are thankful, His Grace, Archbishop Matheson.

There are difficulties in this Province at the present time, there is depression everywhere, but I believe the sturdy sons of those sturdy sires will carry on and will meet the present conditions and difficulties in the same spirit that their sturdy sires met theirs.

I am not unmindful of the great part that the Northwest Mounted Police have played in this Province and all through the northwest. They have maintained law and order and it has never been maintained better in any other country on this earth. We have all been filled with admiration by the stories of that magnificent body of men. I have read that some time ago 800 of these men patrolled the whole Northwest Territories. They were men of intelligence, many of them highly educated, men of splendid physique, and great courage. They maintained law and order and they dispensed justice so impartially that they were loved and respected by the Indians, as well as by the whites.

There is another great factor in the development of these western Provinces. With material development has also kept pace the development of the religious life. Religious truths have been inculcated in the communities as they developed, so that side by side with great agricultural development and the development of natural resources the needs of the spirit have not been neglected. Great credit is due His Grace, Archbishop Matheson, and to men of other denominations, men of the type of Dr. James Robertson, great leaders in the spiritual realm. It was my privilege yesterday to worship in a church in Winnipeg. The church was filled to the doors with men and women, and such singing, such hearty singing! The message of the minister was one of unity. He stressed the getting together on matters of agreement and minimizing the non-essentials. It was a splendid address, and as I looked over that audience and saw the keen interest and the reverence of every man and woman there, I said, "So long as men and women will meet in such a way and listen to the truth in the churches of Canada, Canada need not fear any internal or external sinister forces."

And now I must pay my respects to my old friend, Thomas Rodwell. Thirty-five years ago I was a young teacher in the Glasgow Institution, and Mr. Rodwell—"Tommy", as we called him—came in as a pupil-teacher. Part of his time he had to devote to supervising the boys out of school with me. Tommy was always there. In fact, he assumed responsibility from the first day he entered into the work. He assumed so much responsibility that it made it very easy for me, and I liked it. He entered into his work with a seriousness that augered well for the future. When he knew I was coming here, I told him I was going to tell you folks something about him. He wrote back and prayed me to use discretion. I am going to be discreet—because he knows something about me. I think it was Harry Lauder who was asked to give the after-dinner speech at a wedding. He was the best man. He got up and said, "I have known the bridegroom for a very considerable number of years. Yes; I have known him for a very long time, and he knows that I know, but mum's the word."

Mr. Rodwell has his peculiarities, I must admit. Some years ago we were traveling together from Ogden, Utah. We had been to a convention there, and just for the sake of auld lang syne we got to using the double-hand alphabet. An old gentleman was sitting with a friend behind us and he noticed this conversation and said to his friend, "John, look at those fellows ahead of us. They are deaf and dumb." My friend Tom and I never turned around; we kept on talking. "Why", he said, "you can easily tell they are deaf and dumb. Haven't they peculiar-shaped heads?" Imagine the old gentleman's surprise when I said "good morning" to him the next day.

Now, whatever shape Mr. Rodwell's head assumed in those days I think he has a fair-shaped head now, because he has grown in wisdom and stature. But I must say he has a few peculiarities. One of these peculiarities is long-headedness; another peculiarity is hard-headedness; and another peculiarity is benevolence. Those are three characteristics that are necessary for any successful superintendent, and Mr. Rodwell has them in full measure. He proved

his mettle as a capable teacher, and since he has come to the Manitoba school he has proved that he is a capable manager and able administrator. He was thoroughly trained under that grand old prince of educators, Dr. Addison, and I wish him well. The motto of the city of that school that nurtured us is "Let Glasgow flourish." Concluding, may I express the wish: "Let Manitoba and its beautiful school for the deaf flourish also."

PRESIDENT'S ADDRESS

(Dr. Elbert A. Gruver, Superintendent of the Pennsylvania Institution)

At the last meeting of the convention, in Faribault, Minn., Mr. Frank M. Driggs, of Utah, president, gave an exhaustive account of the education of the deaf, with an extremely interesting history of the formation and development of the Convention of American Instructors of the Deaf. Mr. Frank W. Booth, of Nebraska, president of the conference of Executives of American Schools for the Deaf, at its meeting in Colorado Springs last fall, presented in a most attractive manner a summary of the founding and the operations of the conference since its establishment.

These organizations are closely related in personnel, objects, and procedure. Many in attendance at one were also in attendance at the other, so I shall assume that all here tonight are thoroughly familiar with the history of the education of the deaf and of the purposes of these organizations and shall not repeat what these men had to say.

I shall, however, take up the narrative where they dropped it and try to give you as briefly as possible some idea of what has occurred since these meetings, adding a few suggestions for the future—not in the role of sage or seer but more as an interpreter of past experiences and present tendencies in the general education of the deaf in America.

Conventions, associations, conferences, societies, leagues, and federations are the order of the day, not only in our work but in almost every educational and humanitarian endeavor, and they have been peculiarly necessary in the successful carrying on of the education of the deaf.

This "getting together" idea has become a general practice among educators of the deaf; in fact, we have become so accustomed to "meeting" that the procedure is just a little stale.

It sounds trite to say that we must have cooperation and unity of purpose before tangible results reward our efforts, but I am sure that we all agree that the practice of associate effort is one of the main things that draws us here, one of the things we most desire and for which we constantly strive. It is this rubbing of elbows, interchange of ideas, and cooperative effort that has in it the lure of leadership and the satisfaction of being led. It stimulates interest, creates altruism, promotes professionalism, and sees the education of the deaf as culture—enriching the group. The past is a rich experience, full of interesting episodes, pregnant with progressive ideas and lofty ideals; a history of educational achievements akin to a miracle! Did not Aristotle, the Greek philosopher, think it impossible, and did not Lucretius, the Roman poet, declare to "instruct

the deaf no art could ever reach; no care improve them, no wisdom teach." It is a long stretch of time, effort, and imagination from Aristotle and Lucretius to St. Augustine; from Agricola to Father Pedro; from Bonet to de l'Epée, to Heinicke, to Gallaudet, and to our present educators of the deaf who are no less inspired and no less imbued with the spirit of helpfulness. The present is just as full of possibilities, as rich in opportunities and as replete in experiences as the past, and what the deaf child gets out of it will depend largely upon what we as teachers put into it.

The convention of American Instructors of the Deaf is one of the agencies through which this remarkable success has been made possible in America. Its future usefulness will depend largely upon our knowledge of its purposes and interpretation of its policies, how it operates and the nature of its work.

The convention has objects, as have all well-regulated and properly conducted organizations. These may be stated briefly under three heads:

First, to secure the harmonious union, in one organization, of all persons actually engaged in educating the deaf in America.

This is a large order and one which has not been filled to the entire satisfaction of many here tonight.

Second, to provide for general and local meetings of such persons from time to time, with a view of affording opportunities for a free interchange of views concerning methods and means of educating the deaf.

This object is what we are here for this week. I do not think anybody familiar with the history of the convention will say that we have not lived up to the letter, as well as the spirit, of this object. We have afforded abundant opportunity to meet; have rigorously interchanged ideas and have greatly multiplied methods until we sometimes wonder how such a small group is able to stand up under the heavy pressure.

Third, to promote, by publication of reports, essays, and other writings, the education of the deaf on the broadest, most advanced, and practical lines. This the convention has delegated largely to the conference and is admirably carried on through the agency of the American Annals of the Deaf.

Generally speaking, these objects have been pursued by the convention with marked success since its establishment in 1850 in New York City. At times there have been decided differences of opinion as to whether or not harmonious union could be secured or was even desirable; as to what constituted the proper and best methods and means of educating deaf children—and we are not wholly "out of the woods" in that respect yet—and also as to what are the broadest, most advanced and practical lines; sharp lines of demarcation were drawn on the methods to be pursued; definitions did not define nor did any single process seem to meet the general requirements.

I shall not enter into a discussion of methods of instruction. We are content to have our ideas and opinions and allow others to have theirs, asking them to accept ours only insofar as they can do so conscientiously, after careful investigation and proof of their practical values.

Differences of opinion have existed, exist now, and will continue to exist, but out of these differences have developed useful processes in education and a progressive spirit in action without which our organization would die a natural and timely death.

It is a long stretch of time and effort from 1850 with its methods to 1931 with our practices. We interpret, in the light of modern practices and needs, the ideas of our forefathers and pursue the objects of the convention in the same spirit of advancement as those who founded it. The broadest, most advanced and practical ideas on the education of the deaf in 1850 were discussed in the light of the knowledge of that time. We should as well discuss the same principles in the light of the knowledge of the present—that is progress.

The convention has always stood for that which is good in the education of the deaf. What should it stand for now in light of modern developments that would further advance the education of the deaf along the broadest, most advanced and practical lines? The answer is found in part in the very excellent program in your hands, in which many phases of the education of the deaf are presented and discussed.

What, then, should the convention of American Instructors of the Deaf stand for? Opinions in this respect may differ greatly, but it will not be amiss to mention a few which might be considered steps in the line of progress:

First, the convention should be the channel for the finer emotions of the entire group of teachers of the deaf. It is recognized as the first and official organization of the teachers of the deaf. It should, therefore, try in every way to measure up to its responsibility and give to the teaching body inspiration and guidance. This is difficult at present. The first object of the convention is to secure the harmonious union, in one organization, of all persons actually engaged in educating the deaf in America.

We have harmony, we lack united effort, and we enlist only about one fifth of those actually engaged in the work. What then contributes to the lack of a complete fulfillment of our first object? In my judgment, the chief drawback to great enrollment and larger and better meetings is that there are too many organizations and too many meetings, each trying to do the same thing at about the same time and in about the same way; each sapping the vitality of the other and weakening the constitution of the general body of teachers. I have felt strongly for some years and still feel that there can be worked out some agreeable and satisfactory means of bringing into closer relation the several bodies directly interested in the education of the deaf.

One of the outstanding features of the meeting of the convention in Belleville, Ontario, several years ago was the evidence of sympathetic cooperation that permeated the entire body during the sessions and radiated a warmth of good feeling. It was very apparent to all observers that divisions no longer existed. Members of all the American organizations of educators of the deaf were in attendance, as they are here tonight, with but one purpose in mind—to advance the education of the deaf along the broadest, most advanced, and practical lines. Many who attended in Belleville

were members of all the organizations; some were members of several; some members of but one and a few not members of any. That will apply as well in Winnipeg tonight.

To one who for more than 25 years has been a member of all the organizations and has attended nearly all the meetings of three and some of the meetings of the fourth, it is at times puzzling to tell which body is in session. From the external appearances this meeting might be a session of any of the organizations or a combined meeting of all. The same condition has existed for 10 or 15 years. In some instances, the same individuals serve as officers, the same names appear on the programs, and the same general discussions take place, the same type of demonstrations are given, and the same faces are in evidence in the group pictures. The only marked changes come when the grim reaper cuts one or more from our ranks.

I am not in a cynical mood, nor do I wish these expressions of my opinions to be construed as a criticism of the very excellent efforts of many at considerable cost in time, labor, and money—all good in themselves, with full praise for their self-sacrificing efforts and the excellent result secured—but why this lost motion, why this duplication of effort, and why this sapping of vitality?

The existing good feeling and the interlocking directorates, instead of complicating conditions, should serve to lessen the difficulties and make the way easier for united effort.

A federation of all the active bodies is very desirable, preserving the distinctive characteristics and corporate name of each; the federation could meet every 3 years and the allied bodies each year or every other year in widely separated parts of the country.

It may take a few years to accomplish this, but is it not worth trying? It may also create some feelings of emptiness, but is it not worth the effort and personal sacrifice to again join in the common cause under a single banner?

Dr. Harris Taylor, former president of the American Association to Promote the Teaching of Speech to the Deaf, a few years ago ventured to express a similar opinion, but his suggestion at that time did not meet with enthusiastic response. Dr. Newton T. Walker, of revered memory, president of this convention, at Council Bluffs, spoke of the benefits to be derived from such a federation, and your president at Nashville and again at Colorado Springs urged that something be done. I again present it as one of the most urgent and pressing matters for the convention to consider at this meeting.

The four bodies have permanent committees for consideration of this matter, and your president is a member of two, but nothing has been done. He is as much to blame for this inactivity as any other member. The matter has been dropped apparently. This may not be the proper time nor the most fitting manner in which to renew the subject, but it is very close to my heart and its solution becomes more imperative and the need of some sort of federation more apparent as the years pass. I trust that some definite action will be taken at this meeting toward joint meetings of the several bodies at convenient times with the combination of some activities and the elimination of others.

When we seriously ask ourselves, Why must we be identified with more than one national "professional" organization in order to secure the advantages we are entitled to? when we seriously ask ourselves what is gained by a multiplication of organizations; why we affiliate with another one or help organize a new one, we shall have more clearly defined purposes for our organizations, more energy for those things which are of the most value, and better appraised our general attitudes.

Second, the convention should see to it that proper individuals are selected to be teachers, that proper training is given them, so that their acceptance into a school may provide an increasing group of cultured people in our profession whose influence is unquestioned and for whom a code of general action is not needed and rules and regulations for general behavior need not be formulated or set down for observation.

Insofar as my experience gives me a basis for judgment, there is no single formula for determining a good teacher. In the last analysis the important factor in a teacher is personality. If she lacks personality, she does not possess the one essential qualification of a good teacher. Is she well educated and properly prepared? Does she have capacity to teach? Can she see clearly what is needed and work patiently toward the desired results? Can she forget herself and live for and with the boys and girls while she teaches? Every good school has teachers who measure up to this standard, but, paradoxical as it sounds, good teachers do not always make good schools. The school, too, must have personality; neither is there a single formula for the basis of a good school. Each good school has its particular good points which stand out and differentiate it from other good schools of a similar character. It may be management, type of equipment, methods of instruction, location, or it may combine all of these, but if it lacks atmosphere it does not possess one of the essential qualities of a good school. Methods do not make the school. Most of our methods have proper places in some of our schools, but no single method has yet proved to be a panacea—and for that matter neither has a combination of them solved our problems.

The convention should also help to promote and encourage that kind of life in our schools which is best, with a minimum of conformity. Standardization may be an excellent device for machinery and may speed production, but it kills personality. The human equation will always confront us, the one startling and surprising element left for us to handle. It should, further, through its members, particularly those of us who are head teachers, principals, and superintendents, make it possible for the teacher to be a person rather than a cog in the machine, thus insuring the sacredness and inviolability of personality. We should also see that no set policy, either of custom or expediency, shall smooth us all into one dead level or cast us all into the same mold, thus making our educational processes mechanical, so that servility, rather than service, is produced. It should also offer the teacher the leading educational news of the day through its publications and should provide an opportunity for them to hear some of the best thinkers, observe the best practices, and absorb the best methods leading to success in other fields of education.

Third, the convention should encourage research work in classroom problems looking toward the right of each classroom to be a

healthy, happy, unmolested place where growth in character can be normally continuous. I do not mean that the classroom should be converted into a research laboratory. I do mean, however, that every school should have some educational research to refine educational procedures, methods, and practices, and to ascertain the best ways of extending these educational advantages to all the children.

I recently read an interesting article on research by Charles H. Judd, dean of the School of Education of the University of Chicago. I paraphrase it to suit our needs.

Much valuable research has been and is being conducted in education, and a number of interesting experiments are being carried on in the education of deaf children. It must be admitted that we are slow to profit by some. Most of us have great difficulty in shedding worn-out ideas and practices. We simply cannot lay them aside, nor can some of us adjust ourselves to the changes that are going on in the world, and particularly the world of education.

The education of the deaf will not reach its full dignity nor will our educational ideals be realized until we replace some of our traditional practices by modern and scientific procedure. At present our educational practices are dictated largely by tradition, personal opinion, adherence to method rather than to the facts and laws of science of education. We do not yet know the best methods of instructing and caring for deaf children; we are far from knowing the most practical aims of education and of employing the most effective means of realizing those aims, and we have not learned the very best ways of spending our educational funds. For example: How far have we gotten with causes and prevention of deafness, with hearing aids, with vocational training, with scientifically equipped schoolrooms, with proper lighting, etc.?

In our schools for the deaf educational research should be, in the main, practical rather than pure research; it should be psychological in character rather than physiological, and educational rather than medical. We must constantly be on our guard to distinguish between real and so-called "research"—for there are many pedagogical sins committed in the name of research. We must also distinguish between the practical application of real research and experimentation at the expense of the child's development, to distinguish between entertainment and instruction, presentation of a subject and teaching the subject.

We often think of the science of education as very remote from our daily practices in the classroom and are often afraid of the processes and devices used by scientists. I am free to admit that I have looked askance at the methods of measuring school results by means of certain tests as likely to lead to unjust and harmful criticism, and I am baffled by some of the methods used in the study of reading and number work, but I fully realize that I am no authority on these subjects. I know that many good things have been discovered by laboratory psychologists, and I should therefore be willing to be guided by their findings.

There is no really good reason for the aloofness between science and practice which so often exists in the education of deaf children. If we can be made to realize more fully that scientific study of our methods and devices are not directed primarily to the criticisms of our ways of doing things or to our methods of instruction, but to the

discovery of better methods and practices in teaching, we will come to realize that fundamental scientific study bears something of the same relation to practical teaching that physiology bears to medicine.

Fourth, the convention should insure the teacher a more active participation in its affairs. For some years I have felt that the teacher did not have so full a share in the operations of the convention as she deserved and that the superintendent and principal played too important parts. The convention should be a teachers' meeting, with teachers on the program and teachers in charge. They should conduct it for their own benefit and incidentally for the profit of the superintendents and principals. In this respect we have the example of the National Education Association, whose presidents have been chosen from the ranks, and a practical illustration in the very excellent program arranged by our vice president for this meeting in which teachers have a full share.

Fifth, the convention should make provision for training deaf teachers, particularly those who wish to enter the field of vocational instruction, as that at present seems to be the branch of educational work which offers the largest opportunities to them under modern methods of instruction.

Sixth, the convention can assist greatly in designating the proper organization to assume the task of classification of teachers, teacher training, registration, summer schools, etc. There seem to be too many and diversified interests in this part of our work. In my judgment, something should be done to regulate or standardize these activities or designate a satisfactory channel through which each or all should operate.

Some feel that the convention is the proper agency to promote teacher training, registration, and classification of teachers, others think the conference should do it. While these two organizations procrastinated the association and the society did it. We have no just cause for complaint, unless we feel it is not properly done and can improve upon the work.

In this particular field of activity—teacher training, classification, and registration—a federation of organizations would help to clarify the issues if not entirely solve the problem.

I shall mention only two of the recent innovations—the registration of teachers and the conducting of a summer school at Johns Hopkins University by the association and the affiliation of the Central Institute Training School with Washington University at St. Louis. The summer school by the association at a college, university, or normal school, with credit for the work done, is an established custom; the affiliation of the Teachers' Training School of Central Institute with Washington University is recent, and for your information I quote from one of our school papers, which states the matter more clearly than I can:

All may not agree with all of Dr. Goldstein's ideas as to the best ways in which to promote the education of the deaf. But certainly there should be unanimous approval of his very practical and very effective efforts to raise the standard of basic education and technical training of the teachers of the deaf.

Central Institute is now to be directly affiliated with Washington University of St. Louis.

The course required for the training of the teachers of the deaf hereafter at our Teachers' Training College will be a full 4-year university curriculum. The freshman and sophomore years may be taken at any university or junior col-

lege, and the junior and senior years at Central Institute for the Deaf will complete this special course of training. The degree of bachelor of science in special education will be given by Washington University to fully qualified graduates of the Teachers' Training College of Central Institute for the Deaf.

This marks a special advance in our work. It should be a stimulus to every other training school for teachers of the deaf in the country to do its utmost to raise standards. In the course of time it should mean the attainment of higher levels of really scientific work in our schools for the deaf. It should help to strengthen present plans for the official certification of teachers of the deaf. It means far and wide a beginning blessing to thousands of deaf children, the ultimate beneficiaries in the years to come of Dr. Goldstein's fine work.

Seventh, the convention should inaugurate a movement to assist the Negro teacher in receiving the benefits of the established training classes, summer schools, and other activities.

I do not mean to even intimate that the Negro teacher or the Negro deaf child is neglected. Much has been done and is being done for the Negro deaf child, but much more can be done. The superintendents who have Negro children under their direction and who employ Negro teachers find it difficult to secure properly trained teachers conversant with modern methods, to assume charge of their Negro classes.

It seems to me that provision should be made for the systematic training of Negro young men and women in the theory and practice of the oral method of instruction as well as the general theory of teaching the deaf, so that they can train their own people later.

I appreciate some of the difficulties to be encountered in placing such a program into operation, but I feel sure that satisfactory arrangements can be made and suggest that this also be considered in our imaginary and possibly idealistic federation of organizations of teachers of the deaf.

At the call of President Hoover, 3,000 leaders of child health and protection assembled in Washington November 19-22, 1930, for the third White House conference for the study of the children of the Nation. For more than a year committees were at work over the entire country gathering material for the conference. The material collected is of the utmost significance as it brought forth facts in the education and care of children of all types and makes it available to everybody.

President Hoover said the problem of child health and protection falls into three groups:

First, the protection and stimulation of the normal child; second, aid to the physically defective and handicapped child; third, the problems of the delinquent child.

Dr. William J. Ellis, of Trenton, N.J., chairman of the entire committee on the physically and mentally handicapped, sounded the keynote by saying:

That the handicapped child is no longer a liability but a potential social asset, that public opinion needs to be educated to this new attitude; that wherever possible it is best to enlarge the scope of existing facilities so that the handicapped child marches side by side with the normal child, with special facilities developed only when he cannot fit into the general pattern.

This same committee set forth a bill of rights for the handicapped child, as follows:

The handicapped child has a right—

1. To as vigorous a body as human skill can give him.
2. To an education so adapted to his handicap that he can be economically independent and have the chance for the fullest life of which he is capable.

3. To be brought up and educated by those who understand the nature of the burden he has to bear and who consider it a privilege to help him bear it.
4. To grow up in a world which does not set him apart, which looks to him, not with scorn or pity or ridicule, but which welcomes him, exactly as it welcomes every child, which offers him identical privileges and identical responsibilities.
5. To a life on which his handicap casts no shadow, but which is full, day by day, with those things which make it worth while, with comradeship, love, work, play, laughter, and tears—a life in which these things bring continually increasing growth, richness, release of energies, joy in achievement.

The White House conference was of particular significance and of special interest to us in that it was the first time the deaf were included. In former conferences the deaf apparently were not deemed of sufficient importance to be considered. At this one, however, section IV-B was devoted entirely to the consideration of the deaf and hard of hearing. This is a distinctive step forward and insures the further consideration of the deaf in the future conferences.

From a press report by Hon. William John Cooper, United States Commissioner of Education, reporting the findings of the White House Conference on Child Health and Protection and published in School Life for March, we quote the following items concerning the physically handicapped child, the deaf and hard of hearing included.

Taking the unit of 5,000 children, the White House conference says "that you may expect to find 22 percent, or approximately 1,000, who need special attention to their physical well-being. Two thirds of them, or nearly 700, are improperly nourished, some hundred more have weak or damaged heart. Thirty five or forty are tubercular, and twice as many more are suspicious cases; some 40 are so deficient in hearing as to require special treatment and education, and 2 are totally deaf; an unknown number need some attention to their eyesight, but probably 10, including 2 totally blind, are in need of special teaching, and another 35 are seriously crippled. In brief, there are between 200 and 300 in need of medical care, of whom some need hospitalization and special treatment."

Quoting further the Commission says, "I noted that you have approximately 40 children who need immediate attention and specific instructions because of seriously impaired hearing. This doesn't include an uncounted number whose school work would be improved if they were more favorably seated in the light of audiometric examinations. The two who are totally deaf should go to a special school for the deaf. The conference finds that these residential schools are fairly good but urges scientific study of their aims and plans, better financial support for them, more inclusive curricula, better prepared teachers, and more attention to vocational training, guidance, placement, and follow-up work."

The personnel of the committee on section IV-B was Josephine B. Timberlake, superintendent of the Volta Bureau, Washington, D.C., chairman; Gordon Berry, M.D., Worcester, Mass.; Knight Dunlap, Ph.D., Johns Hopkins University; Harvey Fletcher, Ph.D., Bell Telephone Laboratories, New York City; Elbert A. Gruver, LL.D., Philadelphia; Percival Hall, Litt.D., Washington, D.C.; Helen A. Keller, Forest Hill, Long Island, N.Y.; J. Schuyler Long, Litt.D., Council Bluffs, Iowa; Hugh Grant Rowell, Teachers College, Columbia University, New York City; Harris Taylor, LL.D., New York City; Miss Betty C. Wright, Washington, D.C.

The following recommendations were made by the above committee through its chairman, Miss Josephine B. Timberlake:

One of the most important questions under discussion by the White House conference is the question of prevention. For that reason we wish to call your attention to the very large number being reported upon by your committee.

Last night, in his splendid address, President Hoover said that there were about 300,000 children in our schools handicapped by defective hearing. It may be true that not more than that number are actually handicapped by defective hearing, but your committee wants to emphasize the fact that there are 3,000,000 children in our schools whose hearing is below normal.

We do not mean to say that all of these children, or possibly not even half of them, are handicapped by the degree of deafness which they have at present, but all of them are potentially handicapped adults. There is where some of our prevention may come in.

Your committee has eight recommendations to offer. First, that the discovery of deaf and hard-of-hearing children be promoted in every possible way. To this end, audiometric surveys of school children should be extended until the entire school population is included and until every child has his hearing tested every year. This is primarily work for the school systems assisted by the various agencies and organizations in the field.

Second, that every child found to have impaired hearing be given proper medical attention, so that the defect may be corrected or its progress arrested, if possible.

Third, that all public-school systems be urged to take steps as rapidly as possible toward the installation of special classes and special instruction for hard-of-hearing children, in accordance with the analysis of this report.

Fourth, that the department of public instruction in each State be urged to provide means and personnel in its organization for the development of possibilities through the State for the early discovery of the hard-of-hearing child and the provision of adequate means for his school treatment and instruction.

Fifth, that population surveys adequate in scope and extent to determine standards of age, race, occupation, and local difficulties in auditory defect, and to give information as to the incidence of different types of defect be undertaken by agencies competent to carry the surveys through to completion over a succeeding term of years.

Sixth, that provision be made through some agency, such as the National Research Council, for the integration and promotion of basic scientific research on problems of audition, physical, psychological, and physiological, whose results should be contributory to the solution of the problems of the deaf child and the hard-of-hearing child. This program should look to an activity during a period of 15 to 20 years and should provide immediately for preliminary work essential to the further pursuit of this and other programs.

Included in this preliminary work are the production of adequate scales and tests for lip reading and speech, and a survey of the actual standards of work in the schools for the deaf.

Seventh, that provision be made through an agency competent not only in regard to general educational problems in regard to the special work for the deaf, but for the prosecution of educational research which shall contribute to the improvement of the general, special, and vocational education of the deaf and the hard-of-hearing, both in the public schools and in schools for the deaf.

Such an agency might be constituted through an existing institution working under the direction of a national committee, and should work with and largely through existing universities, schools for the deaf, and other agencies.

Eighth, that provision be made for the establishment and conduct of a nursery school for deaf infants, which, while relatively independent in its operation, shall work in cooperation with the various other agencies in the field of the deaf and the hard of hearing. Such a school should be staffed primarily with persons trained in modern nursery school methods.

There have passed from our ranks since our last meeting three members whom this convention has honored and who have been an honor to the convention. I refer to Dr. J. W. Jones, Miss Mary B. McCowen, and Dr. W. Laurens Walker. At our last meeting in Faribault they were with us either in spirit or body, active in our councils and progressive in thought and ideas for the advancement

of the deaf. We all loved them and respected their opinions. We shall miss them greatly at this meeting.

I wish to express my personal appreciation and that of the convention for the work done by its committees. I also, in this connection, wish to state that your vice president has been very active during the past 2 years assisting in every way possible and the excellent program that will be presented to you during the convention is the product of his labors.

In closing I wish to thank you for the honor conferred upon me and the school which I represent, by electing me president of this convention, an honor I assure you I greatly appreciate and the dignity of which I trust I may be able to uphold.

We are gratefully indebted to the Winnipeg School for its invitation to meet here. We appreciate most highly the cordiality of our welcome and the great amount of careful preparation for our entertainment and comfort. We look forward with much pleasure to the days of the present week and are glad of the privilege of again meeting in Canada. Superintendent Rodwell has set forth in glowing terms the attractions of Winnipeg. He was very modest in describing the school, but we shall have an opportunity to see for ourselves. The Manitoba School has a splendid plant, built a few years ago at a cost of approximately \$1,000,000. We have already experienced a sample of the royal entertainment we are to receive and I know all will profit by the splendid addresses and papers offered and by the discussions on the floor and about the tables and benches.

(After several announcements were made, the session adjourned.)

SECOND DAY, TUESDAY, JUNE 23, 1931

PROGRAM

8 to 10 a.m.:

Exhibits, demonstrations, and outlines; industrial exhibits in charge of P. N. Peterson, Minnesota school.

8 to 9 a.m.:

Demonstrations and outlines—Advanced Arithmetic and Elementary Algebra, Mr. Barton Sisenig, Pennsylvania Institution; Seventh-Year Language, Miss Marjorie Casey, Manitoba school; Rhythm Correlated with Physical Education, Miss Maud Carter, North Dakota school.

9 to 10 a.m.:

Demonstrations and outlines—Arithmetic in the First Two Years in School, Mrs. Mary E. Hill, Nebraska school; Outlines of Primary and Intermediate Geography, Miss Marion H. Lamb, Pennsylvania institution; Story Telling, Mrs. Margaret C. Smith, Colorado school; Teaching Pronouns to the First-Year Class, Miss Josephine F. Quinn, Minnesota school.

10 to 12 a.m.:

General session, Dr. Elbert A. Gruver, presiding. Address of greeting, Hon. Ralph Webb, mayor of Winnipeg; the Development of Reasoning, Mr. Arthur P. Buchanan, Texas school; the Development of Reasoning, Prof. Irving S. Fusfeld, Gallaudet College; Hearing Tests for Pedagogical Guidance of the Teachers, Dr. G. Oscar Russell, Ohio State University; the Training of the Deaf for Positions in Industry, Mr. John W. Curtis, director Placement Service for Handicapped People, Minneapolis, Minn. Miscellaneous business—Appointment of committees.

2 p.m.:

Industrial section, Supt. H. E. Day, Missouri school, presiding. A Review and a Prophecy, Mr. Arthur G. Norris, Missouri school; Examinations in Trades, Mr. P. N. Peterson, Minnesota school; Girls' Vocational Work at the Manitoba School, Miss Alice Cuthbert, Manitoba school; Bookbinding for Girls, Mr. T. L. Anderson, Iowa school. Discussion, led by Dean E. Tomlinson, Manitoba school.

6 p.m.:

L.P.F. dinner, Dr. J. Schuyler Long presiding.

8 p.m.:

Reception by superintendent and Mrs. Rodwell. Special exhibition of dancing by pupils of the North Dakota school.

MORNING SESSION

The convention reassembled at 10 a.m., Dr. Elbert A. Gruver presiding.

The secretary, Mr. Ignatius Bjorlee, read communications from the following members expressing regret at inability to attend:

Dr. Harris Taylor, New York, N.Y.

Frank M. Driggs, Ogden, Utah.

The mayor of the city of Winnipeg, Hon. Ralph H. Webb, in an address to the convention, expressed officially his pleasure at having the organization meet in Manitoba and hoped for it a profitable and very pleasant week.

Dr. GRUVER. The next on the program is an address by Mr. Buchanan of the Texas school.

THE DEVELOPMENT OF REASONING

(By Mr. A. P. BUCHANAN, of the Texas school, Austin, Tex.)

When the deaf child is brought to our door to be started upon the road of learning, we should look upon the career that he is to pursue as that of not only acquiring knowledge, but of acquiring the tool which is essential for him in gaining knowledge, or reason. The formal study of reason, as the means of acquiring knowledge or the means of discovering truth, is called logic. We might assume that philosophy and science with all their branches are dependent more or less upon logic, inasmuch as it teaches the methods of procedure in the acquisition of knowledge, and we must possess the means of knowledge before we can acquire knowledge itself.

It is not my object to discuss philosophy but merely to step upon the threshold of the subject, or, as you might say, just enter the vestibule. In the consideration of the aim of learning we find there are two types of knowledge; making use of the eyes simply in order to see and enjoy the sight of things, and also to make use of them for the practical purposes of life.

It is by our ideas that things are presented to the mind, so that we can reason about them and acquire knowledge, and the words we employ express our ideas. If reasoning is to be developed in the deaf child, we must at the outset pave the way for the means of developing the idea. Words we employ express ideas; then it naturally follows that we should so present words or language to the child that the language written, spelled, or spoken may produce ideas, that the child may reason with them and thereby acquire knowledge.

It might be well to emphasize the particular and peculiar difficulties presented when dealing with these children who are bereft of hearing, which possesses the greatest educational value of all the senses, and the loss of which results among other things in inadequate comprehension and use of language—the key which unlooses all knowledge.

Preyer claims:

The great superiority of the ear to the eye is but slightly prominent upon superficial observation of the child that does not speak, but we need only compare a child born blind with one born deaf, after both have enjoyed the most careful training and the best instruction, to be convinced that after the first year, the excitements of the auditory nerve contribute far more to the physical developments than those of the optic nerve.

It is rather well-established by research that deaf children do not differ from normal children in their thinking, but resemble the normal children, though always those of a somewhat younger age. Another established fact is that all men are not endowed alike by nature, and the gifts of each vary greatly in the consideration of mental capacity and its development. Another proven fact is that the mind of man depends completely upon sense organs. A child without any sense organs would have but little mind. This harks back to the old principle that there is nothing in the intellect unless it is previously in the sense. This fact then presents to the teacher the value and the great importance of the development of the senses.

In the instruction of the deaf is there not a tendency upon the part of most of us to have our work so highly systemized that we feed our instruction in homeopathy doses to which we expect the child to respond and produce certain symptoms which we are apt to diagnose as independent thought? In this sort of instruction, does our school training develop all the senses and mental processes of the pupils, or does it develop a few at the expense of the others? Are we demanding that the child think independently or does he become mechanical and automatic in his mental efforts—or in other words, are we developing the cerebrum or training the cerebellum? Are we producing reasoning power, or simply "habits" of thought instead through the little brain? There should be a development of common sense—common sense, the greatest gift that we may possess. Lack of common sense and habits of thought usually go hand in hand.

The development of thought or reason should be started as early in a child's scholastic career as it is possible, and this should be done in conjunction with the teaching of the word or the English, so that ideas may be developed.

Upon the cover page of the last issue of the Volta Review, the June number of 1931, appeared the following lines from the pen of Carl Shurz:

Ideals are like stars; you will not succeed in touching them with your hands, but, like the seafaring man on the desert of waters, you choose them as your guides and, following them, you reach your destiny.

It was a quarter of a century ago that just such a guiding star appeared upon the horizon of the Minnesota sky. This star had been in existence some 15 years previous to my observation of it. It has been my ideal and my guide in the endeavor to develop reasoning on

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the part of those whose hearing has been impaired to such an extent that the spoken word leaves little or no impression.

The development of reasoning on the part of the pupil in the early stages of his education may be accomplished by resorting to "Wing's." By this I do not infer that it is necessary to become "air minded" but that if the Wing symbols be used we may accomplish that which we wish to develop in the student.

It may be well to give a brief description of the Wing symbols for the benefit of those who are not familiar with them by taking Dr. Smith's description as it appeared in the last number of the Companion, that for May 25, 1931. The Wing symbols were devised and developed by George Wing some time between 1880 and 1885 and have been in constant use in the Minnesota school ever since. Quoting from Dr. Smith we find:

The symbols follow closely the recognized principles of grammar. The essential parts of the sentences are indicated by initial letters, thus: Subject (**S**), Object (**O**), Verb (**V**), Adjective Complement (**C**), Noun Complement (**NC**); therefore the transition to the study of technical grammar later on is easy and natural. The transitive verb is shown by a line pointing straight forward (\nearrow), indicating that the action is carried on to an object. The intransitive verb is shown by a line curved downward and inward (\swarrow), indicating that the action is not carried on. The passive verb is shown by reversing the active verb, with the line pointing backward to the subject (\searrow). The simple tenses of the verb are indicated by short lines above the verb symbol, slanting backward for the past tense (\nwarrow), vertical for the present tense (\downarrow), and slanting forward for the future tense (\nearrow'). Thus we have the important grammatical principles—subject, object, complement, transitive and intransitive verb, active and passive voice, present, past, and future tense—all indicated simply and clearly by the symbol forms.

The modifying elements are designated by the numbers 1 to 7—appositive (1), possessive (2), adjective word, phrase, or clause (3), prepositional phrase (4), adverb word, phrase, or clause (5), infinitive word or phrase (6), participial word or phrase (7). Auxiliary verbs of a potential nature are indicated by the sign plus (+), others by the sign minus (-). Coordinate conjunctions are indicated by broken links of a chain ($\square\!\square$), indicating the parity of the parts connected. In subordinate conjunctions one link is placed above the other (χ), indicating the dependence of one clause on the other. By using the symbols as thus outlined, the pupils are all the time learning grammar without knowing it.

The long-continued use of the symbols has convinced us that they possess many outstanding advantages that other methods do not possess. They are very flexible and may be used throughout all the grades, from the first to the last, even to the extent of doing away with the systems of diagramming recommended by the various textbooks in technical grammar. Parsing and analysis become much easier by the use of the symbols, as they can be applied to the analysis of sentences just as written on blackboard or paper, with no need of lifting out of its setting the part to be examined and of placing it in the columns as in other methods of teaching language. The aim in the use of the wing symbols is to break the habit of sentence construction with no guide but memory and to teach the essential parts of a sentence in such a manner that they are easily comprehended by the pupil.

The symbols bring about proper sentence construction and develop thought and reasoning on the part of the pupil in his use of language.

For the past 7 years I have been using colored crayons in conjunction with the symbols. All nouns are taught in yellow, pronouns blue, verbs red, adjectives violet, adverbs orange, and the prepositions green. This I find a great help in aiding the pupils to visualize the different parts of speech. To the regular wing symbols I have created two new ones—the figure 3 with a dot over it (3), distinguishes the article from the adjective. The written letter (p) is placed above a noun or pronoun to distinguish the plural form from the singular form.

The true worth of the symbols as a means of developing the reason is shown in having the pupil develop sentences for a given set of symbols: Such as 3 3 3 S^p 4 \checkmark^2 4—5; or to develop the function of words and phrases in sentences. Take for instance the word "fly." By the symbols you can have the pupils develop a sentence wherein the word is the subject simply by placing the symbol (S) over the word

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"fly" and asking the pupil to incorporate it in a sentence. In like manner you can have the pupils incorporate the same word as object of the verb; object of the preposition; as predicate nominative; as an adjective limiting the subject, object or the object of a preposition; as a transitive verb; as a passive verb; in the present, past, or future tense; as present progressive; as a participle; as a participle used as a noun, or as an adjective; as an infinitive, as an infinitive used as the subject or object; used in apposition, as possessive, etc.

In fact I cannot speak too highly of the wing symbols for sentence teaching, sentence construction, and to show the function of all word forms in sentences. "They just have to be good." "They have to be good to be where they are."

By starting with the development of reasoning by this method the child is well on the road of education for by it it is a very easy matter during the first year to teach between five and six hundred words besides developing such question forms as who? when? where? what? what color? how many? etc.

I am such a firm believer in the wing symbols that there is no doubt in my mind but that the results brought about by the conscientious and consistent use of them will be the means of answering the oft-asked question: "When is a man educated?", and answered thus by Joseph Fort Newton: "When he can look out upon the universe, now lucid and lovely, now dark and terrible, with a sense of his own littleness in the great scheme of things, and yet have faith and courage. When he knows how to make friends and keep them, and above all when he can keep friends with himself. When he loves flowers, can hunt birds without a gun and feel the stir of a forgotten joy in the laugh of a child. When star-crowned trees and the glint of sunlight on flowing waters subdue him like the memory of one much loved and long dead. When he can be happy alone, and high-minded amid the meaner drudgeries of life. When he can look into a wayside puddle and see something besides mud, and into the face of the most forlorn mortal and see something beyond sin. When he knows how to live, how to love, how to hope, how to pray—glad to live and not afraid to die, in his hands a sword for evil, and in his heart a bit of a song."

Dr. GRUVER. The same subject will also be treated by Professor Fusfeld.

THE DEVELOPMENT OF REASONING

(By Prof. IRVING S. FUSFELD, Gallaudet College, Washington, D.C.)

A consideration of our subject, The Development of Reasoning, presupposes an understanding of the term "reasoning." I have no intention of entering into a prolonged discussion of the physiological or psychological aspects of the question. For working purposes the teacher need not be overwhelmed by the complexity and the mystery of the thought processes. Her chief concern is with their manifestations. But I cannot avoid at least brief reference to what is involved in that which we call "mental activity."

A few simple, yet fundamental, principles stand out as marked features of the reasoning function. In the first place, reasoning must be regarded as essentially an activity.

Secondly, reasoning is not an activity that can leap forth full-grown, like Minerva from the forehead of Jove. Its development from the incipient stage to the fully matured level is promoted by two factors, and these two forces we may call maturation and exercise. A muscle will develop when it has passed through the natural stages of physiological growth and when also it has been properly and regularly exercised; otherwise it will be stunted and atrophied. The principle holds true in the field of reasoning, where we think, not in terms of muscle, bone, or tissue, but in terms of neural mechanism. Modern psychology lays especial stress upon the assumption that the agency concerned with the so-called "mental part" of our behavior has a physical basis in the form of a nervous system ramifying to all parts of the body, but centering for the higher functions—reasoning—in the cortex of the cerebrum, where the basic neurone structure and synaptic or connecting processes carry out the impulses which we call collectively, "thinking." The degree to which reasoning is developed depends, like the muscle, upon the stage of maturity reached by the neural mechanism and the amount of exercise it has experienced.

A third fundamental principle is the assumption that reasoning is in essence an exploratory and manipulating activity, whereby facts and concepts experienced in the past, or present before the senses, are searched for, tied together, regrouped, and recombined, thus forming new concepts—an activity that in the sum total we call "reasoning."

With these general principles in mind, let us now turn to the particular methods by which the reasoning powers may be stimulated. In so doing we may well start at the negative pole and steer toward the positive.

It is only fair to mention, in passing, that the school does not take pains to develop the child physically by proper food, sanitary and hygienic surroundings, exercise, rest, and recreation, cannot hope to develop to their maximum possibilities the reasoning faculties inherent in the child.

The purpose is also defeated when the teacher does too much for the pupil. This is a pedagogical sin that will work great harm to the pupil. When children fall into the habit of depending upon someone else, always waiting for someone else to show them how, always standing by until someone else starts things for them, there

will be little hope of turning out children who will think for themselves. It should be the conscious aim of the school to break up such a habit, and substitute for it an inclination toward initiative and self-reliance. We question whether the teacher herself is thinking properly when, for instance, she writes in the correct form for a child who has misspelled a word in a lesson and who is quite able to look it up for himself in the dictionary. It is just as much a fallacy if the teacher makes a language correction when by merely pointing to the place or putting a cross alongside the offending line she can stimulate the pupil to make the correction himself. A minimum of reasoning is aroused and a progress-obstructing habit is established when the pupil is permitted to give back a lesson by rote. Equally harmful is the practice of the teacher who deems it necessary to digest every bit of mental food taken in by the pupil, thus deadening whatever exploratory and manipulating possibilities the lesson could provide. In this category we must also place the teacher who will limit her lesson to the drill which she has worked out, or possibly inherited from her normal training days, without encouraging the children to ask their own questions and to make it their own lesson. The teacher who fears to venture beyond the cut-and-dried bounds of the drillbook or textbook is at the same time retarding the development of reasoning in both herself and her pupils.

Let us consider also this incident. On a visit to a certain school we were privileged to be present at a lesson in geography. All went well until one of the children in giving her answer tripped badly in her speech. Then and there the lesson was halted while nine other children and an interested visitor witnessed what was without question an exhibition of pedagogical cruelty. Certainly no child enjoys being made the target for prolonged public correction. However, in due time an approximation to the correct articulation was achieved. But what about the main lesson? Can reasoning power be developed under such conditions? We doubt it.

Turning now to a more constructive side of the question, we see so many opportunities to make the school from the beginning the motivating influence in developing well-rounded reasoning power that we wonder why it should be otherwise. It need not be necessary to designate any particular subject in the curriculum; the general principles apply in the whole learning process.

A great deal of our school work consists in giving the pupils questions and topics which they are supposed to develop with the help of details accumulated in their lessons in the schoolroom. In this type of work it is the endeavor of the teacher to discover whether the pupils have been acquiring the necessary content of facts in the different subjects. Of course, this ground work is necessary. But our cry is, however, that the process of education should not end with that.

Reasoning can be developed when the expanded lesson is given the class, the problem being not to have it returned verbatim, but condensed first in a brief statement, boiling the main idea down in a nutshell. The class is here compelled to go through the process of mental exploration for the essential facts in the lesson. Manipu-

lation of the facts learned is brought out in the process of discarding the minor details and fastening upon the major idea—this is reasoning. The "How?" and the "Why?" questions should be the basis upon which the lesson rests. A further illustration of what we mean by this is to be found in the use of legends, mottoes, and proverbs. The lesson should not end with the recital of the facts in each case but should lead rather to the underlying meaning. The cartoon, of great value in the schoolroom, presents a picture, sometimes an attractive one, but its chief purpose is to arouse reasoning, not to give information. When a story is to be read in class, the teacher can induce reasoning if she will ask the pupils to illustrate answers to questions on the lesson by drawings, however crudely executed.

Exercises with an imaginative basis are a fruitful source for developing reasoning power, for in them the pupil is compelled to venture out mentally into realms of experience much broader than his own little limited personal sphere. They create opportunity for exercise in mental exploration and manipulation, the two great keys to reasoning power. Is the class studying the World War? Then, imagine yourself a French poilu, a British Tommy, a German soldier, and tell the story from those angles. Is the class studying a foreign land in geography? Why not have the class take a real-imaginary trip to that land, including all the details, in make-believe, from the making of plans in advance and obtaining passports, to the trip itself? Or, the facts could be given from the pen of an imaginary Japanese, Russian, Italian, or Turkish schoolboy. Why not have the pupils tell the story of Lindbergh's flight to Paris from the point of view of a French boy in the crowd at Le Bourget field? Or a story from Little America from a pupil who, for the moment, is an imaginary member of Admiral Byrd's expedition there. The opportunities for developing reasoning in this manner are limitless. The child will derive more lasting value from the lesson if he is to give a report with himself impersonating General Santa Anna than if he had to answer the question: "Who was the leader of the Mexicans in our War with Mexico?"

Dramatization, impromptu just as well as formal presentations, carries wide possibilities in developing reasoning. Acting out the experiences of home, bank, store, farm, mine, and so on, as they come up in the school lesson forces the pupil to work over the facts of his lesson mentally, inducing analysis, and so we again have mental exploration and manipulation.

"If" exercises are of great value. "If Lincoln had not been assassinated." "If France had not helped the American colonists." "If I had been Sir Walter Raleigh." "If the United States had not entered the World War." "If I had a thousand dollars." "If Washington were alive now." And so on, ad infinitum.

The scratch sheets attached to the answer papers in the annual college-entrance examinations in some cases offer eloquent testimony that the pupil has been taught to coordinate his thoughts before giving expression to them. For instance, in answer to the request: "Describe Silas Marner's actions when he returned to his cottage after Duncan Cass had been there", one pupil took the trouble first

to lay out in outline form the facts which he intended to include in his reply. Having done this, he was in a position to judge of a number of things that in the total make for good reasoning. He was thus able to determine whether he had all the necessary facts; he was able to decide which of his facts were important and which were irrelevant, and so act accordingly; he was able to determine whether his facts were arranged in a logical sequence; and he was able to determine whether his facts led to a logical conclusion. Having completed his outline, he then proceeded to build around it an excellent account of the situation. Such a pupil has the correct method of approach to successful learning. His answer was not a rote response, but a carefully thought-out succession of ideas, each one following logically upon the other. Having been taught to analyze what he has learned, he has a decided advantage over the one who lacks the same kind of training.

Thus far in our discussion no reference has been made to the multitude of opportunities provided in every progressive school in the extra-curricular activities. These are in themselves a great host of stimuli to the development of reasoning. We find them in the shopwork, on the playground, in the social activities of the school community. If the school athletics, clubs, organizations, and dramatics develop initiative and self-reliance, they thus become active agents in the development of a well-rounded, not a narrow, academic, type of reasoning.

Our conclusion is a very simple one. If a child has been taught so as to draw out into active exercise the reasoning power latent in him, to that extent will he have been educated. He then will be, not a living catalog of vague facts, but one able to adapt himself to the situations of life as they come before him. The possibilities of bringing this about are limited only by the vision of the teacher.

(Dr. G. Oscar Russell, head of the phonetics laboratory and speech clinic, Ohio State University, delivered an address on the subject Hearing Tests for Pedagogical Guidance of the Teachers. As the speaker's revised copy of his address was not available in time to be included in the proceedings, the following summary is given.

Dr. Russell's chief contention was that since only a very small proportion of children in schools for the deaf are entirely devoid of hearing, it is possible, with the help of hearing aids, to make practical use of residual hearing in the education of such children. A first step, however, is the need of determining the range within which a child hears, preferably by a differentiating audiometer which will give what would be analogous to a "spectral analysis" that breaks up the auditory sensations into individual frequency bands. With this information at hand the residual hearing available can be "stepped up" by an appropriate hearing device. However, it will be necessary, before such hearing remnants can be of practical service in the classroom, to implant brain patterns of understanding for each sound separately.)

Dr. GRUVER. We come now to a discussion on the training of the deaf for industrial purposes. It gives me great pleasure to introduce Mr. John W. Curtis, director of the Placement Service for Handicapped People, Minneapolis, Minn.

THE TRAINING OF THE DEAF FOR POSITIONS IN INDUSTRY (A DISCUSSION OF WHAT VOCATIONAL DEPARTMENTS CAN DO TO MEET INDUSTRIAL DEMANDS)

By JOHN W. CURTIS, Director Placement Service for Handicapped People, Minneapolis, Minn.

INTRODUCTION

In scanning the pages of recorded human history, we find evidence of attempts at vocational training in each period of progress from the savage on up through the centuries to modern times. Among the earliest peoples, the youth was trained to fish, to hunt, and to aid in defending the clan or tribe against its enemies. Such training was usually very informal and for the most part it was given individually; but it was specific training for a definite need. In fact, it appears that the training was given to meet existing demands which were expected to continue throughout the life of the trainee.

After the dawn of civilization, vocational training became somewhat more formal and was often given to groups of learners instead of being so exclusively individual; but it continued largely as specific occupational training designed to meet existing needs. This was especially true prior to the industrial revolution, and it has been true in many instances and in many places since that rapid change from muscular force to mechanical power, i.e., from hand work to machine production.

In recent years mechanical invention and scientific discovery have progressed so rapidly that leading educators (both in the schools and in the industries) are being impressed with the need for changes in vocational training for the great majority of our youth. Much of the training which was imperative for the savage is now useless; some of the most important training for early civilized men is now of limited value, and changes are now being made so rapidly that no thoughtful educator feels safe in making very definite predictions concerning vocational training best suited to the needs of the masses during future years. However, the problem is confronting us, and we must meet it as well as we can by recognizing immediate needs and by trying to be prepared for adjustment to future needs as evidenced by present trends. Therefore it seems fitting that you have chosen the topic which has been assigned to me for discussion at this time.

In all training institutions and in every occupation followed by our people it is important both for the vocation and for the trainee that thought be devoted to what can be done to get the worker ready for the job or jobs where he will be needed. In such departments as those with which you are particularly concerned there is especial need for a careful consideration of what can be done to meet the needs of industry. In this discussion it is granted that most of your trainees are not able to compete in the vocational markets of the world unless they are well trained for service in fields of endeavor for which they are reasonably well suited. The demands of jobs vary as greatly as the capacities of individuals. Some jobs make heavy demands on physical strength, while others are exacting in regard to the native or intellectual ability of the worker. For these reasons it is highly important that the vocational educator should strive to acquaint himself with the qualities of trainees and with the demands of vocations.

WAYS IN WHICH VOCATIONAL DEPARTMENTS CAN AID

It is here proposed to point out some of the ways in which vocational departments can aid deaf learners in adapting themselves to the needs of industry and to discuss briefly some of the administrative procedures which may be employed by a vocational department in making its efforts fruitful. This list is not exhaustive, but it includes some items which the writer regards as fundamental to efficient service on the part of a training agency for the deaf.

Through its vocational departments and its auxiliary workers, the training agency which is striving to meet the needs of the industries for which it is attempting to prepare workers should—

(1) Encourage trainees whose qualities seem to promise success in a given industry or occupation to enter training for it; and to discourage all others from taking such training.

(2) Train an adequate number of workers for jobs which exist or which are reasonably certain to be open to workers when the training has been completed.

(3) Acquaint employers with the possibility of using deaf workers to advantage and to interest them in permitting a placement officer to place properly selected, well-trained workers in jobs where they can demonstrate their ability to achieve as compared with the hearing worker with whom the employer is already acquainted.

(4) Educate the general public, both concerning the desirability of employing deaf workers and in regard to their ability to achieve, when properly placed, as compared with hearing workers.

(5) Employ a full-time, well-trained, highly efficient placement worker who should cooperate with employers in the proper placement of deaf workers. He should also constantly aid in up-grading all deaf workers in the industry for which they have been trained; provided, of course, they are capable of further progress. It would be the duty of such an alert, progressive placement officer to aid in preventing the training from lagging so far behind commercial and industrial requirements.

AID FOR THE LEARNER IN SELECTING AN OCCUPATION

One of the most important things any training department can do is to help learners to enter the occupation for which they are best fitted. Much has been said about vocational guidance, but it appears that relatively little is yet positively known about how to determine what a given individual is best qualified to do. However, both general observation and such research as that done by Thorndike indicate that learners are more likely to succeed in things in which they are keenly interested than in things for which they have not developed an interest. If the learner is given contact with a number of jobs which would be possible for him, the exploratory experience may stimulate interests which may be utilized in the selection of training suited to his individual needs.

The training authorities are certainly safe in discouraging the selection of an occupation for which the learner is clearly unsuited. For example, we would not approve of a deaf worker taking commercial training in the expectation of securing a general office position where many and varied items of instruction would be given

the worker each day, where the telephone should be answered frequently, or where the general public must be met at the front counter from morning till night.

There is much besides the prospective worker's interest which should be taken into account. A study of the personal traits of the trainee may render sufficient information to bar him from certain occupations. Careful observation during an interview may yield evidence of the person's lack of fitness for certain callings. In some cases a battery of tests carefully selected to measure native intelligence may be helpful in determining what the individual should not attempt. Achievement tests may be used to advantage in other cases. Everything possible should be done to aid the trainee in entering the field for which he is best fitted. Life is too short for him to spend any portion of it in training to be a misfit.

The 1920 United States census report states that we have more than 500 different fields of employment. A more recent statement gives the number of recorded pay-roll jobs as more than 20,000. The Minneapolis survey, referred to elsewhere in this discussion, listed 2,515 pay-roll jobs in the 121 local occupations which were studied. Undoubtedly, we have many more than 20,000 pay-roll jobs in the United States.

A helpful approach to the selection of jobs for deaf people would be to take a census report, study the jobs carefully, and see in which of them a given individual could perform efficiently if he were not deaf. A helpful plan would be to employ the technique which was used in the Minneapolis survey which was as follows: An attempt was made to isolate the physical handicap as a single factor in the performance of the job under consideration. For example in the case of a deaf worker, it was assumed that the candidate for placement possessed all the qualifications except hearing which were required in performing the task under consideration. Then it remained to determine whether that specific job demanded that the worker be able to hear sounds or signals. For example, if we are considering the training of a deaf man for the job of chauffeur or truck-driver, we assume that he has all of the desired qualifications except hearing and then we proceed to determine whether hearing is necessary in such jobs. We grant that he has the intelligence and physical strength necessary to turn on the ignition, to regulate the gas feed, to adjust the spark lever, and to step on the starter. We also grant that he is capable of shifting the gears and causing the car to move forward at the desired speed as well as to steer it skillfully. In fact, if we could be certain that our deaf automobile driver possessed the only car on the highway or in the street, we might approve of his training for a job of that kind. However, since it is imperative that every driver be able to hear the signal of every other driver who wishes to pass on the highway and of fire companies in crowded streets, it is seen that reasonably good hearing is at least highly desirable for drivers of automobiles and trucks. In many places, deaf people would not be permitted to drive cars because it would be dangerous both for them and for others. Therefore, the training of deaf men for chauffeurs and truck drivers might not be approved. In the Minneapolis survey, every job was approached as pictured above; and a serious attempt was made to determine whether

the physical handicap under consideration would interfere with efficient job performance. Of course, in every job the worker must be able to serve without danger to himself and without imperiling the safety of others.

Both the demands of the job and the abilities of the worker must be clearly understood before intelligent advisement is possible. After the job is accurately analyzed for its motion demands and for its sense requirements, the problem consists in the selection of a worker who possesses the requisite native intelligence, adequate previous training and experience, and the personal qualifications of honesty, industry, and adaptability desired for the particular job in question. This being true, no deaf person should be trained for a given job unless his other qualifications indicate that he may succeed in that job. It is assumed, of course, that all jobs chosen for deaf workers may be performed efficiently without using the sense of hearing.

In general, it has been found that it is only the exceptional individual who rises above the occupational level of his parents; hence the vocation of the father often aids in advising the son about his occupation. In their Survey of American Schools for the Deaf, Day, Fusfeld, and Pintner found that only about 11 percent of 3,991 deaf children have fathers who are engaged in the so-called "white-collar" jobs. Even if these children were not handicapped in any way, it is probable that only 10 or 15 percent of them would ever qualify for clerical, managerial, or professional service. Since every one of them is handicapped either by deafness or by defective hearing, it is only the exceptional child who should be encouraged to undertake anything above ordinary routine labor jobs. He should be made acquainted with occupational requirements and aided in measuring his abilities with the yardstick of jobs demands.

THE TRAINING APPROPRIATE FOR THE CHOSEN FIELD OF SERVICE

After an occupation or field of service has been selected, much may be done for the trainee besides fitting him for the job in question. If a vocational department is to be rated high in preparing workers to meet the needs of industry, it should set up a training scheme which will enable each trainee to qualify quite thoroughly for the job, trade, or occupation which has been chosen as a vocation. He should be given thorough training in such related subjects as are demanded for success in the work which is to be done in the future.

For example, if the man is to be a janitor he should know the qualities and proper uses of cleansing agents, the proper care of various kinds of floors, finishings, furnishings, etc. If the person is to be a pressman he should know much about papers and inks in addition to make-ready and press operation. If the chosen occupation is farming, the trainee should learn as much as possible about soils and their enrichment, scientific marketing, and other problems closely related to the commonly accepted job of farming.

The set-up for any given course of training should be such as to encourage thinking and develop initiative. The training content in every course should give sufficient repetitive experience to develop skill, establish confidence, and form definite habits of proper pro-

cedure. Effort should be made to give learners the broadest possible working experience before they are finally placed in industry. The equipment and training environment should be as nearly as possible that which they are expected to meet in actual service after completing their school training course.

OTHER DESIRABLE TRAINING FOR HANDICAPPED WORKERS

It is the feeling of many placement officers that about 10 percent of a handicapped worker's occupational difficulties may be charged to his physical handicap, and that about 90 percent of his success or failure is conditioned by individual traits or qualifications. If this evaluation is even reasonably accurate, it is highly important that deaf workers should be encouraged to capitalize as fully as possible all their desirable traits and helpful qualities. Their training should give practice in meeting the practical problems of life. They should learn to get along with their fellow workers and with their employers by working under the supervision of other learners and by becoming supervisors themselves to direct the work of other trainees. They should be given practice both in commanding and in obeying during their training period, so that they may be efficient in each situation later.

The vocational value of desirable habits, personal neatness, and a uniformly courteous attitude toward others should be emphasized from the very beginning of the training period. A trainee should not be regarded as ready for placement until the above desirable qualities have become well established. Ninety percent of his success or failure may be attributed to these personal qualities. Each trainee should be given definite instructions about how to locate a job and should have actual practice in applying for jobs before he is released from the vocational department's supervision.

In still further preparation for meeting the problems of life, a definitely organized plan should develop habits of honesty in its broadest sense, as well as high ideals of loyalty to associates and to superiors. In this connection, honesty should be interpreted to signify a high standard of work and an honest measure of service for each day's pay.

During this training period each learner should be induced to read much about his chosen field of work and also to read about as many related fields as possible. The goal aimed at here should be genuine occupational interest and broad vocational efficiency. In addition to the above, both the safety and labor laws of the State in which the learner is planning to work should be studied under the guidance of the vocational department in which the learner is being trained.

THE TRAINING AND DISTRIBUTION OF WORKERS IN NEEDED NUMBERS

It is certainly unfair to young people to train them for jobs which are not likely to be available when they are ready to go to work. After determining as accurately as possible what the capacity of the trainee is, the training authority should face its duty both to the youth and to society by training young people only for fields of service in which they are most likely to succeed. The further

duty of distributing the trainees both geographically and industrially should be met with equal courage. In general, it seems that handicapped workers succeed best in communities where they are acquainted and where their friends and relatives may cooperate with them. For this reason, with the possible exception of those with high intelligence and special aptitude for other vocations, the farmer boys and girls should be prepared to return to the farm and they should be equipped for enjoying the application of their training to the problems of successful farm life.

The sons and daughters of factory workers may, with few exceptions, be trained for various lines of factory service and returned to the field of service in whose atmosphere they have been reared. In most cases, it seems to be a serious mistake to permit large numbers of the deaf to migrate from rural or village life into the large cities where they shall have to compete not only with the urban handicapped worker but also with the many normal city workers. Keeping handicapped workers distributed equitably among the industries and as widely as possible geographically appears to be greatly to their advantage. This plan makes it easier to secure suitable jobs for the handicapped worker and it tends to lessen the competition which he must meet. For example, if we have 100 deaf boys in training, it is far safer to train 5 of them for "white collar" jobs, 20 for skilled labor jobs, 25 for semiskilled routine factory work, and 50 for farming, unskilled labor, and so forth, than to reverse the program with reference to the numbers trained.

THE EMPLOYER MUST BE INFORMED CONCERNING THE DEAF WORKER

Definite information concerning the efficiency of handicapped workers in a given occupation greatly affects the attitude of the employer. Recently the writer was visiting in a factory where much of the work is well suited to deaf workers. In one department, the foreman had worked many deaf men previously in another similar factory and he was sure that intelligent deaf men could do any job in his department quite as well as if they were able to hear perfectly. In an adjoining department not more than 30 feet distant, the foreman had never worked deaf men and he felt certain that deaf workers would not prove satisfactory in his department. To the writer, the difference in opinion seemed to be solely due to the previous experience of the two foremen.

Of course, various devices may be used in interesting and informing prospective employers. However, it appears that Minneapolis recently made an advance step in preparing employers to participate in the proper placement of physically handicapped workers, including the deaf. With the understand that we are merely reporting and not boasting, the following description of the Minneapolis plan is presented.

Dr. Charles A. Prosser, director of Dunwoody Institute, was induced to assume responsibility for the direction of a survey to determine the motion and sense demands of many jobs upon the worker. He secured two experts from the Federal Board for Vocational Education, Washington, D.C., to assist him in conducting the survey. He also employed a staff of trained observers to visit factories and

other places where the work of industry and commerce is carried on. These field workers analyzed 2,515 pay-roll jobs in 121 different representative industries in Minneapolis. The purpose of these analyses was to determine what demands each job made upon the motor activity and also upon the sense perception of the worker. For example, if the act of hearing did not enter into the job performance in any way, the job in question was scored as being suited to performance by a deaf person. On the other hand, if the click of a machine part was the only signal for the cooperation of the human operator, or if the absence of hearing endangered the safety of the worker or of his associates, or if the nature of the task to be performed was such as to require very frequently spoken directions from the foreman, the job was scored as unsuitable for the deaf.

In a few of the occupations where the task of personal observation and individual analysis of each job would require too much time or result in too great expense, the facts were determined by means of the conference method. In applying this technique to the problem groups of men who possessed broad as well as detailed experience in the various jobs of the occupation were brought together; and they discussed the various demands of the job and decided whether or not a worker who, for example, was deaf might perform the job just as well as he could if he possessed normal hearing ability.

Both in the case of personal observation and analysis by the trained observer and in the case of the conference method, the work was reviewed by the foreman and by the superintendent or manager. This gave the prospective employer a definite knowledge concerning the findings of the survey so far as his own business was concerned, and at the same time it developed much interest in the possibility of placing handicapped workers in the business on an economic or competitive basis. Where time and opportunity permitted, the rank and file of workers were informed concerning the objects of the survey. All of this tended to inform the general public in regard to the plans for placing handicapped workers where they could be useful and where they could compete with normal employees. This participation in the survey on the part of employers and employees has given them both interest in and information concerning the placement service which secures a more favorable entrance for the deaf worker.

THE FUNCTIONS OF AN EFFICIENT PLACEMENT AGENCY

When a youth has completed a well organized and properly administered course of training, we have a right to expect him to have acquired much information concerning the basic principles of the occupation for which he is preparing. However, we should always keep quite clearly in mind the fact that he is not an adequately trained workman when he leaves the training institution. Even in cases where the training environment is a replica of commercial conditions, there still remains an atmosphere of protection from outside competition. The relation of trainer and trainee does not usually develop adequate initiative in the youthful worker and it almost never develops the speed required in actual working situations which must be met in commercial life. It is well to recognize the fact that

the training school should give the youth the needed "tools" with which to work and learn when he gets out in industrial and commercial life. If he has properly mastered the school training course, he is well prepared to begin learning in the rich field of experience in his chosen occupation. This all points to the fact that a graduate of a training school should not be dropped overboard to sink or swim unnoticed by the training institution. The school which sends its product out to survive or perish without proper aid in making the necessary adjustment to working conditions is spending too much of its appropriation on the preliminary training. In many cases the preliminary training is of little or no value unless the learner is aided in making desired progress under actual working conditions on the job.

For best results, the youthful worker needs much help in securing a position suited to his own abilities and with an employer who is both able and willing to grant working conditions which make proper continued training possible. All of the above statements are true in a large measure of every youthful worker; but they are especially true of deaf workers who need help in securing an opportunity where they can be efficient in spite of their handicap. They must not only have a job where hearing is not required in the performance of the work; but they should be guided into the service of employers who are willing to have them serve in situations where their deafness does not inconvenience other workers. There are relatively few youthful workers who make as great progress as they should in actual service after leaving school. Deaf workers should be induced to take advantage of this situation and press forward and prove their superiority in their chosen line as compared with their hearing brothers. Superior service attracts attention and wins promotion.

In addition to securing appropriate employment for learners, maintaining suitable working conditions, and encouraging reasonable progress in continuing the acquisition of knowledge and skill, an efficient placement service has many other opportunities for usefulness. The placement worker is very largely a field worker and not an office consultant. It is folly to create such an office without providing adequately for rapid convenient transportation. The placement worker should be able to cover his entire field frequently. He should see the trainee's parents occasionally to cultivate their continued interest. He should see the trainees often enough to keep them progressing in the right direction and at the proper speed. He should continually keep in touch with employers throughout his territory and cooperate with them in every way possible.

In some sections, the up-grading of young workers may be accomplished through evening classes where groups of workers in the same line are brought together for short unit-courses of instruction. In some occupations advantage may be taken of unemployment seasons which are caused by climatic conditions or which may be due to business depression. At such times workers may be induced to make rapid strides in self-improvement. In other cases, the placement worker may best convert himself into an itinerant instructor or he may secure part-time instructors to serve in the capacity of itinerant trainers to give individual aid to workers on the job wherever they

may be located and whatever their needs. The training institution has not performed its full duty to the deaf workers until it has established a placement service and equipped it properly for meeting such duties as those mentioned above.

MINNEAPOLIS PLACEMENT SERVICE EXPERIENCE

Minneapolis experience is again referred to, not in a boastful spirit but in order to give a rather definite illustration of what may be done in urban areas. Of course, many trainees should properly be returned to rural sections where their interests and the interests of society in general may be served better than if they had been placed in a city.

Our experience in Minneapolis has included more than 30 different physical handicaps, ranging from limited paralytic trouble or minor mutilation of the hand or foot at one end of the scale to double amputations and total deafness at the other. Of course, the Minneapolis situation differs from that of your training schools, even when we confine our consideration of the handicap to that of defective hearing, because many of our clients are not well trained for any useful service and some of them are more seriously handicapped by advanced age than by the physical handicap which sends them to us for assistance in proper placement in service.

Our records indicate that defective hearing fares as well, in general, in the favorable consideration of employers as any other physical handicap. During the 15-month period basic to these statements 370 placement candidates were registered, and 151 placements were made; 27 percent of the 370 cases registered classify as defective in hearing, and 22 percent of 151 placements made may be grouped as hard-of-hearing people. When it is known that the other 78 percent of placements distribute among 32 other physical handicaps, it is seen that workers who have defective hearing are not unfavorably situated as compared with other handicapped workers.

The range of jobs performed by deaf workers is so great that enumeration is practically impossible. In Minneapolis, the survey of 2,515 different pay-roll jobs indicated that 1,899 of those jobs can be performed satisfactorily by a person who is partially deaf, that 791 of the jobs can be performed by deaf persons, and that 770 of those jobs can be performed by deaf mutes. In each of the three cases reported above, of course, it was assumed that the worker possessed all other qualifications necessary to render efficient service in the job.

All who are interested in the organization of a placement service and all now operating a placement bureau who are trying to get still better results may be interested in the technic employed in Minneapolis. Our experience indicates that better results are secured by writing the prospective employer in advance of a personal call. If the employer is given the facts in a brief letter and knows who is supporting the movement, he usually asks more questions and enters into the discussion of the subject more heartily when a personal call is made. The personal call tends to establish a more friendly attitude on the part of many employers, and it also enables the placement officer to gain needed information in regard to the peculiar needs of the employer in question. An occasional follow-

up in the form of a brief report of progress or a list of available candidates for placement has proven helpful.

Both in written and in oral presentation of information, an effort has been made to be conservative. It is believed that it is better to underrate the ability of candidates rather than to risk what might later be classed as exaggeration of qualifications. On the other hand, in describing a given handicap, effort is made to be accurate; but, if any doubt exists, the handicap is reported to be more, rather than less, serious than it actually is. This course usually prevents the possibility of disappointing the prospective employer. Some Minneapolis employers report disappointments in the past, and the present plan is designed to turn the tide in favor of employing physically handicapped workers in jobs where they can compete with normal people. In other words, an effort is being made to be loyal to the handicapped person and at the same time to deserve and to maintain the cooperation of the employer.

No employer is asked to create a job for a handicapped worker or to employ a person because he is handicapped and needs a job. They are invited to consider handicapped workers on their merits when they have an opening which a handicapped worker can fill efficiently. This plan of conservative dealing and the avoidance of any attempt at "high-pressure" selling is producing results which seem to be constructive, and it is believed that eventually all handicapped people who are able to render efficient service in Minneapolis will be gainfully employed.

Some of you may also be interested in the opinion that the "full-line" salesman rather than the "specialty" salesman is desirable, even in urban centers. By this, we mean that a placement worker should know the requirements of as many jobs as are found in his territory and that he should be familiar with the training given in the institution which he represents. For example, if a placement worker is handling the product of one of your schools, he should know what training you are giving to carpenters, laundry workers, power-machine workers, printers, etc. On the other hand, he should be familiar with the work to be done in the corresponding industrial shops in his territory so as to be of real service to the training authorities who must provide appropriate training, to the trainee who has defective hearing, and to the employer whose interests must be served if the placement is to be successful. In cities, the cost of duplicating calls is not so great as in the country; but many city employers are voicing the conclusion that, except in the case of very large cities, a highly specialized plan is too expensive for the placement bureau and that it consumes too much of the prospective employer's time. In the case of people with defective hearing, it appears that one placement worker should be prepared to place trainees in all occupations found in his territory, just as one placement worker in a small city should place all kinds of handicaps in all suitable jobs.

A 6-MONTH TEST OF A PLACEMENT SERVICE

The survey directed by Dr. Prosser yielded evidence that there are enough jobs of the right kind in Minneapolis to give suitable employment to all local handicapped workers who are able to render efficient service when properly placed in industry.

The next important step was to determine whether local business men would cooperate in the placement of handicapped workers. It was decided to make a 6-month test of this matter by conducting a placement service in accordance with the standards set up by the survey. During this trial period, data were accumulated to picture the situation as clearly as possible with reference to the candidates for placement; and an accurate record of contacts with prospective employers was kept. This placement work during this 6-month trial period was treated strictly as a research problem. An earnest effort was made to learn whether Minneapolis employers would cooperate and whether there was a sufficiently large number of physically handicapped workers to justify a placement service for that class of workers. The result convinced those responsible for financing the work that it was worthy, and they decided to continue their support for the remaining part of the calendar year to facilitate the continuance of the work on a permanent basis.

The rehabilitation department of the Federal Board for Vocational Education, Washington, D.C., decided that the report of our 6-month experiment might prove helpful to others in applying the findings of the survey which had been directed by Dr. Prosser. Therefore, they published our report in mimeographed form, as miscellaneous 1177. Any who desire a copy of the report may address Mr. John A. Kratz, Chief, Vocational Rehabilitation, Federal Board for Vocational Education, Washington, D.C.

SUMMARY

- (1) The history of human progress pictures gradual changes in vocational training. More rapid changes are needed for the future.
- (2) Guidance through occupational information and through vocational experience should be afforded all trainees while they are being studied, tested, and advised concerning suitable jobs.
- (3) Vocational training should include necessary related information; and it should be so administered as to encourage thinking and to develop initiative in workers.
- (4) Deaf youths who possess high-native intelligence may well be educated for trades or professions; but those of low general ability should be trained for jobs in occupations found in their native environments.
- (5) Employers desire and deserve factual information concerning the employment of deaf workers on an economic basis. The Minneapolis survey employed a new technic in securing such information.
- (6) A training school should give a youth the needed "tools" with which to work and learn when he enters the outside world. It should also aid him in entering a suitable occupation and in making satisfactory progress in it.

(7) A training school's most helpful extension device should be an alert and efficient placement worker. During a 6-month trial period, the Minneapolis Placement Service secured evidence that employers are willing to cooperate if handicapped workers are placed in jobs where they can compete with normal workers; and that employers are quite as generous toward the deaf as they are toward any other type of physically-handicapped person.

Dr. GRUVER. I have the committees which I wish to name at this time. They are as follows:

Committee on resolutions.—Mrs. H. T. Poor, Mr. T. C. Forrester, Mrs. Fred C. Numbers, Miss Catherine Ford.

Auditing committee.—Mr. J. W. Blattner, Mrs. Mary E. Hill.

Committee on necrology.—Mr. T. Rodwell, Mr. I. S. Fusfeld, Mr. J. W. Howson, Miss Josephine F. Quinn, Mr. T. L. Anderson.

Nominating committee.—Mr. D. T. Cloud, Dr. J. S. Long, Mr. E. McK. Goodwin, Miss Margaret S. Kent, Dr. O. M. Pittenger.

These committees are asked to report at the business meeting Friday morning.

(Whereupon the convention adjourned until 2 p.m.)

AFTERNOON SESSION

The convention reassembled at 2 p.m., Supt. Herbert E. Day, of the Missouri School, presiding.

Mr. DAY. Just before I left Missouri, Mr. Norris, who was to have presided over this session, told me he would be unable to come, and he asked me to take his place and, also, to read his paper.

A REVIEW AND A PROPHECY

By Mr. ARTHUR G. NORRIS, Missouri School, Fulton, Mo.

We are teachers, doing the best we can to prepare deaf boys and girls for life. There is but one criterion whereby we can judge the success or failure of our teaching efforts—that of the successes or failures of our graduates to become self-reliant, respected, and self-supporting citizens. Ours is a program of rehabilitation. Our pupils are deaf—only the deaf themselves can fully realize what they have lost—and we try in as full a measure as possible to restore what we can. We have accepted the task of making the most of an unfortunate situation; the task of sending our pupils into the world fully prepared for life. We must fulfill it. Though a big task it is not an impossible one, and if we fail it will be because we have not tried hard enough. It is of our successes and failures that I wish to speak. I speak impersonally and with a genuine wish to cast illumination on what we have or have not done, with the thought that a way to better our situation may appear.

The problem before us is essentially a vocational one. Only a small minority of our graduates do, or are intellectually equipped to, enter the professions. The deaf must be fitted to industry, not industry to the deaf. The task is a tremendous one. Dr. Harris Taylor, superintendent of the Lexington Avenue School in New York City, in a recent statement quoted in the Annals of last January, says: "The gravest problem now in the education of the deaf

in New York is to fit them for their proper place as wage earners after leaving school." What is true of the deaf in New York is true also of the deaf of other States, and our approach to this problem must be a courageous one, and we must make that approach immediately. We have been paving the way long enough. For years we have talked about what must be done and have done comparatively little. True, many will take exception to this statement and point out, as I shall do presently, what we have accomplished; but this accomplishment, when compared to the whole problem, is infinitesimal. Just how many of the 500 pupils graduated from our schools this spring will go to college? How many will go into industry? How many are really trained for industry and were assured of jobs? There are about 18,000 pupils still enrolled in our schools. How many of them will be trained in order that they may earn more than a meager living?

Four years ago, at the convention held in Columbus, Ohio, the upward turn in the interest of the profession in vocational work began to be really apparent. Since that time this renewed interest has made tangible showing in the few new industrial buildings erected or contemplated, in the too few additions to industrial equipment, and in the encouragement for additional training for vocational teachers now employed.

So many girls of this industrial age are entering upon industrial careers that we are paying more attention to the training of girls for this sort of work, but at the same time training for home management and family care has not been neglected. Domestic science is receiving its proper share of this new interest. Among the vocations now being profitably taught to deaf girls are power-machine operation, beauty culture, typing, filing, and dressmaking. All of these offer a good wage for the worker.

A most notable instance of the revival of interest of this profession in vocational work is its support of a publication which has for its avowed purpose, "the improvement of vocational instruction in American schools for the deaf." While the support given this magazine has not been all that it should be to indicate the true sincerity of the whole profession, it has been encouraging to the editors to know that there are those in this profession who realize that vocational work is to be the real salvation of the deaf, and that this publication can be of real help in forwarding this movement.

I have stated that new buildings and equipment have not been adequate to meet the need, and it needs but a few moments of serious thought to see that schools for the deaf have been left far behind in this matter. It has been variously stated in this profession that the equipment and organization of schools for the deaf for the teaching of trades were far in advance of schools for the hearing. Nothing could be farther from the fact. Visit almost any large city and see for yourselves single vocational schools which would put to shame our entire body of vocational establishments. I speak not only of equipment and buildings but also of well-formulated programs of training. There are, of course, many more students to be trained, but our lack of students should not hamper the thoroughness and effectiveness of our teaching. We must move rapidly from now on or an entire cycle of industrial life will have passed before we have

caught up with the one in which we are now living. However, one cannot be sure that further expansion along our present lines of endeavor would be profitable. What is urgently needed is a Nationwide survey of the deaf and their industrial status. We should ascertain by careful investigation in what industries the deaf are most acceptable; what industries the deaf can be best trained for; what industries and places in industry there are in which deafness is no handicap, thereby determining our course of expansion and revision of present programs.

Perhaps we make a mistake when we compare our vocational establishments to those in schools for the hearing for the aims in each are somewhat different. Vocational training for the hearing boy, in elementary schools such as ours, aims largely to develop inherent manual dexterity and skill, and at the same time to reinforce scientific training offered in the school. Little attempt is made to teach a trade as a trade. In most elementary schools trades instruction is mainly exploratory work, giving the boy a chance to find himself before entering upon advanced training, hence the name "Finding courses." After the hearing boy "finds" himself, he continues his education along the lines he most likes, be it engineering, the professions, or serious training to fit himself for a trade. Our boys and girls have no place to continue their vocational education with profit. The trade schools now established are not for them, and adequate vocational training of a higher nature for graduates of schools for the deaf has not been provided. In view of this fact, if the deaf are to hold skilled positions in industry, they must be trained for them before they leave the State schools. There is no charity in industry. Industry has no time or money to spend to prepare deaf persons to fill positions. It seems to be our job. We must train our graduates for industrial positions before they leave us, not forgetting, of course, a broad basic foundation preparatory to specific trades teaching and which may be built upon in various directions as needed.

There are many reasons why this is our job. In addition to the lack of higher vocational training is the question of the age of the pupil. It is difficult to induce 20- and 21-year-old boys and girls to continue their schooling; they feel the need to earn a little something. Second, State schools are in closer contact with the industrial needs of the locality and should be able to make trades teaching more effective. And finally, we owe our pupils much more than they are now getting. Being unable to fit the majority intellectually for so-called "white collar" jobs we have given them little instead, little with which to provide their future bread and butter. They are thrown largely upon their own ingenuity and as always in a situation of this kind the percentage of those who succeed is far less than the percentage of those who fail. Failures are no credit to us.

We cling too tenaciously to the old order of things; to those trades which will save dollars in the maintenance of school establishments and are of doubtful practical value; to things which provide good manual training for the deaf boy or girl, but which contribute little to the wage he or she will earn in post-school years; and to the idea that training, past or future, is unnecessary for vocational teachers. In this great metal age there are only two schools which include

metal working in their program. Our time is too fully occupied with a battle of methods and how we can correlate the vocational department with other departments of the school. The latter is almost a complete waste of time. The academic department of the schools as now conducted has little in common with the vocational department, and our efforts to link the two might be likened to efforts to mix oil and water. By violent shaking we can obtain an emulsion of the two, but if we examine the solution under the microscope we will find that the two have not mixed, but that the oil still retains its integrity. It is still oil, though, in fine droplets. For successful trades teaching, which we recognize as paramount to the success of the deaf, the vocational department must dominate, and everything taught in the school must have its place in the vocational advancement of the pupil.

There is much in our academic courses of study which could be omitted or revised to fit the vocational needs of the pupil. Weigh in your own minds the relative practical value to the pupil of the ability to use the framing square as compared to the ability to solve quadratic equations; to know how to justify a form of type as compared with the knowledge that the Magna Carta was signed in 1215, and that it guaranteed freedom as compared with the knowledge that a certain new kind of steel guarantees freedom from rust.

Dr. J. L. Smith of the Minnesota school, in an article in the Vocational Teacher of December 1930, says: "The greater proportion of pupils in our schools for the deaf are of average or below the average ability. What they most need to fit them for the stations in life that they will, perforce, occupy is as good an understanding of spoken or written colloquial English as we can give them and a good vocational training. * * * In the higher grades the time devoted to history, the sciences, and higher mathematics impinges upon time that could be better devoted to practical language teaching."

Dr. Smith has had the courage to say what few have said, namely, "The greater proportion of pupils in our schools for the deaf are of average or below the average ability" and are largely incapable of higher education. With our results in language teaching what they are, this rather definitely precludes the addition of educational features designed to make our schools conform to public high-school programs. It indicates a retrenchment in our present programs which will give us the essential language and the trade Dr. Smith speaks of.

A survey now in progress of former pupils of the Missouri school, though still in its early stages, shows conclusively that the lack of English is one of the hardest obstacles the deaf worker has to overcome. The employers say, "They are hard to talk to, hard to make understand", and consequently give them a chance to make good when it is more or less a last resort.

This survey further shows that this failure to give all a lucrative trade has reduced them to taking what work they can get, whether fitted for it or not, and as a result the median wage of a group of about 100 deaf workers is approximately \$16 to \$25 per week. This is not a representative group, to be sure, but it is a straw in the wind.

Lack of money and loss of cultural training might be offered as objections to an ambitious vocational program, but if the matter of such training were prosecuted with half as much energy as we have prosecuted other phases of our work with such mediocre results, money would be forthcoming, for one must be deaf and blind not to realize the future industry holds for the properly trained deaf person. Improperly trained, the deaf must take what mean jobs fall to their lot and become wage slaves, which would be regrettable, especially when they have at their command concentration far above that of the hearing, and motor ability probably accentuated because of deafness.

As for a loss of cultural training, what greater culture can be found than in the study of the lives of the captains of industry, the lives of great inventors, histories of the trades, and in the glorious romance of the struggle to win comfort, leisure, and riches from the earth. The literature of industry holds a far more concrete culture for our pupils than does that far-off, hazy world wherein lies what we call our "literary education." Furthermore, it is a culture that emphasizes self-assertion, self-reliance, accuracy, integrity of purpose, and the will to win, not by precept but by living example. Vocational training offers countless opportunities for practical character training.

Our most signal failure in connection with our attempts to better vocational instruction in our schools has been the matter of competent training of vocational teachers. We are absolutely at a loss to know where trained teachers can be obtained to fill vacancies. This problem of training is not one for the State schools, but one for the fountain head of our entire system, Gallaudet College.

Hitherto anyone who was a craftsman was eligible to become a vocational teacher in our schools whether he had other vitally necessary qualities or not. There are a number of attributes which a good vocational teacher must have:

1. A thorough knowledge of the trade he is to teach.
2. A good English foundation.
3. A knowledge of the problems the deaf will encounter in industrial life.
4. An understanding of and a belief in the abilities of the deaf.
5. A spirit of discontent with present preparation and training, ever keen to advance his own training in order that the interests of the deaf may be likewise advanced.
6. A certain amount of cultural training so that trades instruction of the future will not be as lacking in this element as it is today.
7. Pride in his work and the knowledge that he is a teacher and not a shop foreman.
8. A working knowledge of teaching methods.

These are some of the attributes necessary for a vocational teacher. We have taken for granted that a suitable personality and character are desirable.

The picture thus far has been dismal, but there is a brighter side; and the most significant feature of this brighter side is a growing spirit among us to recognize this hitherto rather neglected phase of the training of the deaf, evidenced by advanced organization of voca-

tional departments, serious planning of vocational courses of study, employment of supervising teachers, convention aid for industrial exhibits, and, as I have pointed out, interest in a publication to unify the thought of the profession.

There is a way out of most of the deficiencies enumerated here, and that way is in the school for the deaf of the future. This school will be preeminently industrial in tone. School terms will be lengthened to provide for training in agriculture, the quota of time now allotted to academic and vocational subjects will be reversed, and our graduates will leave school for waiting positions made possible through efficient vocational guidance and placement programs. Summer courses for pupils will be offered, and post-graduate work will be emphasized.

Prof. Donald G. Paterson in his memorable address before the convention held 2 years ago in Faribault, Minn., said, "In my opinion * * * industrial training should become the most important and outstanding feature of the education of the deaf." It will become the most important feature in the education of the deaf when we awake to the call of industry for trained workers, and when, as Mr. John E. Travis of the Indiana school has pointed out, we—

Take shops from attics and basements and place them in quarters built for the purpose,

Install much machinery and equipment for instructional purposes only, with no thought of returns in production,

Train industrial teachers for the deaf, and eliminate many of the teachers now in the shops and add many more with new ambitions and ideals,

Enlarge the higher education of the deaf to include technical and trades training, and above all,

Educate legislators and others who hold the purse strings, to the real necessity of this line of education.

Believe me absolutely sincere when I say that the time is at hand for a revolution of our ideas in the matter of vocational training. Paraphrasing the words of Carlyle, we have been building hovels and houses, and we can build mansions and palaces from our material if we but try.

Mr. DAY. The next number on our program is a paper by Mr. P. N. Peterson on examinations in trades.

EXAMINATIONS IN THE TRADES

(By Mr. P. N. PETERSON, of the Minnesota School, Faribault, Minn.)

"Shop language" is a bugaboo all right, and it may be that some of us vocational teachers spend more time and energy talking and writing about it than we do trying to teach it. Fortunately, this paper is not about shop language, except that it becomes necessary to mention it in passing.

Those schools for the deaf that teach shop language regularly have periodical examinations in the subject once or twice a year. Exactly what is the object of those examinations? Is it to find out how many technical terms bearing on a given vocation the pupils know? Or is it to ascertain what they can make out of raw material with tools placed in their hands? To judge from the manner in which such examinations are usually conducted one might con-

clude that the former is the object. For the pupils to know the names of the tools that they use, and to be able to describe them in detail are desirable accomplishments, but not quite so essential as to be able to produce a prescribed project perfectly, and write a composition about it.

To know how a thing is made is well;
To know how to make it well is better.

My idea of a practical shop examination is a thorough test in manual dexterity with tools, supplemented by some written work, and I would not place overmuch emphasis on the written part of it. To effect this I would use instruction sheets written in language so plain and simple that the pupil could understand it. I would select a project well within the boy's ability to make, and, in the cabinet shop, it should be accomplished by working drawings. I would make sure that the boy knew, before he started on the project, what was wanted of him, what kind of material to use, where to get it, and so on. All this would be written down on the instruction sheets. Then I would let him go ahead under his own steam without undue interference and with a minimum of instruction and assistance.

The written part of this examination should be a short description of the project. It should tell only the essential steps in its construction, the kind of lumber and hardware (if any) used, the important operations, how the major members were fastened together, by joints (dovetail, tenon, mortise, dowels, etc.), with nails, screws, bolts, corrugated fasteners, angle irons, glue. How the article was finished: With paint, oil, stain, wood filler, shellac, wax, varnish (flat or glossy).

The instructor might properly ease the description by giving the boy a few leading questions to answer.

In grading, or marking the work, the following points should be taken into account: Diligence, accuracy in measurements, workmanship, speed, amount of assistance given by the instructor, economy (or waste) of material, written work.

I have used the cabinet shop merely as an illustration. The method as outlined can be modified to suit all shops and all grades above the fifth.

Examinations of this nature would necessarily extend over several days, and they could not be given to all pupils in the class at the same time. But they would be practical, and could be made to cover a wide range of operations and activities, including the use of live shop language at the proper time. They would afford the industrially inclined pupil an even break by giving him due credit for vocational excellency, thus raising his average.

Written shop examinations are always conducted under a handicap. They are held at the same time as the academic examinations. Pupils tire of writing and cramming for several days in succession, with nothing to relieve the mental strain.

Mr. DAX. Miss Alice Cuthbert is now going to speak to us on girls' vocational work at the Manitoba school.

GIRLS' VOCATIONAL WORK IN THE MANITOBA SCHOOL

(By Miss ALICE CUTHBERT, of the Manitoba school, Winnipeg, Manitoba)

In an address given in Winnipeg on the subject "Ideals of Education and Service", Sir Henry Newbolt, the eminent British educationalist said:

The English tongue and English literature must be the basis of modern education, whether it be cultural, vocational, or professional, and to it must be added not only a practical equipment for life, but an open-minded attitude toward the problems and difficulties of this complex modern civilization which demands solution—the alternative being disaster.

Graham Wallis defines education as a process by which human beings acquire the knowledge and habits to be fitted to live well both individually and in cooperation.

Having thus defined education, we must now locate the place of home economics in the whole fabric of instruction. Mr. A. L. Thelkeld, superintendent of schools, Denver, Colo., has ably shown this relation in an article on home economics and the whole of education. He says that home economics is really education in home living. Studying the home in its various aspects—

1. Sociologically, we see it as the basic unit of our society.
2. Psychologically, we see it as the place where the most fundamental of all learning by the individual occurs.
3. Economically, we see it as a situation in which first lessons in business management are taught.
4. Politically, it is the first government the individual experiences.
5. Religiously, it is the center of spiritual life.
6. Esthetically, it is the birthplace of attitudes toward things beautiful. All these factors blend to form the character of the individual on which the other social groups depend. For be it not overlooked that the cumulative experience of mankind has failed to reveal any substitute for the home as the basis of enlightened civilization.

Dr. Isabel Bevier, one of the outstanding authorities on the subject, and who has done so much excellent pioneer work in establishing home-economics education, says:

Home-economics workers must not be so occupied in making white sauce that they forget that the art and beauty of life are included in their programs, that the finer forms of social intercourse and the development of gracious womanhood have their place in home-economics training. The public wants what was best in the old forms of family life represented in modern life. It should be enriched by the discoveries of science, the development of art and social and civic responsibilities, but, above all, it must be permeated by the spirit of service and loyalty to the highest ideals.

Regarding the value of home-economics education in schools for the deaf, it not only furnishes material for the training and character outlined but is a splendid source for providing present enjoyment and usefulness and a foundation for the future happiness of the girls. I believe the teaching of language in each practical department has an important place in enlarging the vocabulary of our deaf pupils and we have opportunities for making this language a live thing that do not exist in the ordinary classrooms. In character building we take no second place. The pupils have much more freedom of action with

us. They are placed constantly in positions where their initiative, reliability, honesty, and sincerity are tested in every way. The technique of the particular work they are doing is developed, but do you not agree with me that the ability to meet new situations and to cope with them is much more valuable than mere technique?

We impress on the girls that they must be able to do their work more thoroughly than hearing girls, if they are to make their way after they leave school.

In spite of all these high ideals it was a difficult task to raise the standard of the work in the Manitoba school. Knowing something of the conditions which exist in the industrial departments of other schools and the difficulties they are facing, you may care to hear of the conditions existing in our own school when I joined the staff some 14 years ago.

The printing department had been established for 20 years and was in charge of a teacher who had also a grade in the academic department and was thus able to give instruction only to a group of the older boys after the regular school session. A carpenter showed the boys how to do repair work, also outside of school hours, and a dressmaker had a group of 35 girls each afternoon after school and was expected to do all the mending for the pupils as well as the institutional sewing—an impossible task. These 35 girls were divided into 3 groups for the household science, and I commenced work, my classes being held after the regular school session was over. For 5 discouraging years during the war the work was practically at a standstill, but on our removal to our new splendidly equipped school building in 1922, the vocational department was placed on a much better basis. Qualified instructors were appointed in the household arts and woodwork departments, and the teacher of printing, who had academic work in addition to teaching duties in printing, was given full time in his own department. But best of all, we were placed on an equality with the academic teachers in the matter of hours, placed on the curriculum, and salary, the latter being slightly in favor of the vocational teachers who are specialists in their own lines when they come to the school. All this was not accomplished without opposition on the part of the academic teachers, but I believe they are quite willing now to concede us our place with them in the sun, and with the impetus given to vocational training by the Great War and the prominence given to it in convention programs, etc., a much happier condition of work exists. I may add that my training and experience as a public-school teacher before specializing in home economics proved invaluable in getting my work recognized as an educational subject and in giving a background of knowledge of normal children which has enabled me to make comparisons and have definite standards.

The aims of vocational training for girls are threefold—

1. To equip the girls with a knowledge of millinery, clothing, laundry, home furnishing, foods, household management, home nursing, and mothercraft, which will enable them to take an active share in home and neighborhood activities.
2. To develop definite skill and technique in handling materials and obtaining results.

3. To train the girls to become wage earners as seamstresses, milliners, dressmakers, house decorators, cooks, waitresses, or laundresses.

In our school the whole subject of home economics is divided into household arts and household science, with a teacher in charge of each division. The household-arts subjects include clothing in relation to cost and selection, color, line, and design from the standpoint of hygiene and personal appearance, its care and repair, and as much textile study as the problem warrants. The household science subjects include the selection, care, preparation, and serving of foods with due regard to cost and nutrition, the care and cleaning of all household equipment, the care of the sick and the care and feeding of infants and small children. The girls have practice in all the activities of a well-managed home. We have about 60 girls enrolled in the vocational department each year. These are divided into six groups, the junior group, having 1 hour of instruction weekly. Two other groups 2 periods of $1\frac{1}{2}$ hours weekly, and the 3 other groups 2 or 3 laboratory periods of 1 hour and 40 minutes weekly.

In a school as small as ours very close grading in home economics classes is not easy but this is not an unmixed evil. Often a girl who drags along 1 year with a class, by repeating the work the next year, becomes somewhat of a leader and develops a self-confidence and pride in her work which would not be possible if she dragged through several groups.

In the limited time at my disposal and in a general session I cannot do more than mention some of the devices we have found most helpful in presenting the work.

The lesson is definitely outlined on the blackboard and the girls are required to record a complete story of it in their notebooks. This is very valuable to them as reference for the home work they are required to do each evening during the study period and which we have found an important means of emphasizing the special features of each lesson.

Each laboratory is equipped with a bulletin board on which is placed supplementary information, and the girls are encouraged to read the school magazines with material pertaining to their special work, as well as reference books. Definite attention to language is given each lesson period, and examinations in theory and practice are given each month and the marks placed on the monthly report form.

In the subject material in the household science department the emphasis for the juniors is placed—

1. On their learning to like the subject.
2. On their learning habits of personal cleanliness and thoroughness.
3. On liking, or at least a tolerance for, all foods, stressing the important place of milk in the diet.
4. In language, on the names of the utensils, names of foods ordinarily used, of cloths and simpler pieces of equipment.

The scope of this work is enlarged in the next two groups, which constitute the afternoon classes so much that by the time the girls reach the morning classes they have a working knowledge of the names and care of the equipment ordinarily used in the laboratory,

all the simpler processes of cooking, and the language describing them, including the preparation and cooking of fruits, vegetables, cereals, quick breads, and so forth. They have also formed habits of neatness, personal cleanliness, and individual responsibility for each task.

In the morning groups the emphasis is placed on cooking on the meal basis, nutrition facts are taught, planning of menus, and table service, with increasing responsibility given the girls.

For the meal work a portion of the class is assigned a task and sent to another room to work out the problem. They are permitted to ask questions of the instructor if some real difficulty presents itself, but are encouraged to try to solve the problem themselves.

Each year a small group of girls do house practice work in the suite. They arrive shortly after 7 a.m., don their uniforms, prepare breakfast, which is served promptly at 8, then wash the dishes and clean the apartment before chapel at 9. They return at noon, prepare and partake of lunch, and at 4 arrive to prepare and serve dinner, which must be accomplished before 7 p.m., when study period commences. They are given full responsibility of the dining room and kitchen and take turns in serving as hostess, helper, and house-keeper during their stay in the suite. They are placed on their honor in handling supplies, doing a fair share of the work, working amiably and cheerfully. A valuable part of the training is the attention to details of table etiquette, which it is impossible to check where they eat in numbers in the school dining room. We frequently have guests and the girls take pride in doing their best to make the meal attractive. This group is composed of girls who do not expect to return to school the next year. An effort is made to use their ability for lip reading by encouraging conversation during the meal.

I would not consider this paper complete if I did not pay tribute to Mrs. Hazel Thompson Craig, of Gallaudet College, for the excellent work she did in compiling the very thorough and comprehensive survey of girls' vocational work, the report of which was printed in the Annals for November 1928. As a result of its findings we are encouraged to believe that our Manitoba school compares favorably with other schools in its vocational work for girls. Possibly vocational work is rather an ambitious term at present, for in the allotted 10 years at school there is no opportunity for highly specialized training. As we have been unable to lengthen the time, the next best thing to do was to begin the instruction when the girls were as young as they could possibly benefit by this phase of the work. Some of the infants I have instructed have found it necessary to stand on a box to reach the utensils on the tables, but the results of a good foundation when the girls were quite young amply justified the expenditure of time, patience, and effort.

Our departments are the only ones where the teacher suffers all the years through if any of the foundation work has been neglected. Where the academic teachers, with the exception of the primary, can blame the previous grade or grades, we have to shoulder all the responsibility for our subjects and accept the consequences throughout the whole 6 years or more each one spends with us.

A word as to the future of our deaf girls. I made an effort to find what work is available for them locally after they leave school, but unfortunately have not had the time or energy to devote to this service. One gratifying thing in this respect is the report of a few women who have had some of our girls employed as household help and say they are so thorough and satisfactory in their work, they are willing to have patience in writing instruction for them. A large percentage of our girls have married a few years after leaving school, many are at home with their parents, and in both of these cases they will have ample scope for using the knowledge and skill developed through their home economics training.

In conclusion I would like to assure Dr. McAloney and others who have so ably indicated the weaknesses of our vocational departments and given us inspiration for further effort that we are trying to reach their ideals. As I began by stating that an open-minded attitude toward our problems is invaluable, I shall conclude with the hope that we, as vocational teachers, may ever be willing to learn from whatever source is available, and not have it said of us that "You can always tell a vocational teacher, but you can't tell him much."

[The remainder of the program on vocational training was given over to discussion.]

THIRD DAY, WEDNESDAY, JUNE 24, 1931

PROGRAM

- 8 to 10 a.m.: Exhibits, demonstrations, and outlines. Same as for Tuesday's program.
- 10 a.m.: General session, Dr. T. S. McAloney, Colorado school, chairman. Paper, the Certification of Teachers, Dr. J. Schuyler Long, Iowa school; discussed by Mrs. B. M. Riggs, superintendent, Arkansas school.
- 11 a.m.: Address, The Spirit of the Modern School, Dr. W. A. McIntyre, Provincial Normal School, Winnipeg, Manitoba.
- 1:30 to 3:30 p.m.: Art section, Mrs. Hazel T. Craig, Gallaudet College, chairman. Paper, Why Teach Art?, Miss Geneva B. Llowellyn, Wisconsin school; address, Picture Study in Our Schools, Miss Agnes Hammell, Winnipeg public schools; paper, Correlation of Arts with Other Subjects, Mrs. Isabel K. Noble, New Jersey school.
- 1:30 to 3:30 p.m.: Oral section, Miss Josephine F. Quinn, Minnesota school, chairman. Paper, Why—and Why Not?, Edith M. Buell, Institution for Improved Instruction, New York City; discussion, Mrs. M. C. Smith, Colorado school; paper, Primary Reading, Miss Catherine Ford, Ontario school; remarks, by the chairman; paper, Miss Eunice Hopper, Illinois school; paper, Accent and the Short Vowels, Miss Dorothy B. Mitchell, South Dakota school.
- 3:45 to 8 p.m.: Drive around the city of Winnipeg.
Visit to the Manitoba School for the Deaf.
Picnic supper in Assiniboine Park.
- 8 p.m.: Social hour.
Meeting of the executive committee of the Conference of Executives of American Schools for the Deaf.

MORNING SESSION

The convention was called to order at 10 a.m. by Dr. E. A. Gruver.

Dr. GRUVER. It is a great pleasure to me this morning to present our chairman for the day, Dr. Thomas S. McAloney, of the Colorado school. Dr. McAloney is the man who is entirely responsible for this program. He has made a very interesting program for us and I want you to see this morning the man who has done it and have him carry on as chairman of this meeting.

Dr. McALONEY. With reference to this program, I would say that last fall we sent out questionnaires to each member of this convention to find out just what subjects were desired for discussion. I received replies from the majority of those questionnaires. One of the subjects which many of the members felt should be discussed at this time was the subject of the Certification of Teachers and the request has been made that we discuss the whole thing thoroughly at this meeting of our organization.

The next thing we had to do was to find someone who thoroughly understood the subject, who had given it time and thought, and we discovered that person in Dr. Long, of the Iowa school. This morning he is going to present to you the result of his studies.

THE CERTIFICATION OF TEACHERS

(By Dr. J. SCHUYLER LONG, Iowa school, Council Bluffs, Iowa)

The subject of training and certification of teachers of the deaf has been before the Conference of Executives of American Schools for the Deaf a number of times, and the object and purpose in view have been pretty well threshed out. The proposition has now reached a stage when the endorsement and support of the Convention of American Instructors of the Deaf (those most affected by any action undertaken) are vital to the adoption and successful carrying out of the plan. It is hoped that its discussion by this body will result in the convention's going on record as approving or disapproving action already taken and will bring a reconciliation of differences to the end that all organizations can, and will, work harmoniously together and agree on a definite and satisfactory plan for the future.

In order to understand the question more clearly, and to arrive at a more intelligent appreciation of the proposals already made, it will be best to make a survey of what has been done so far and what it is proposed to do.

After an insistent demand for raising the standard of teachers of the deaf had been voiced for a decade, and after sentiment for some uniform system of training and certification had been gradually developed among leaders of the profession, this sentiment crystallized at the twelfth meeting of the conference held in St. Augustine, Fla., in 1924. And, since training was recognized as the first step toward this end, a committee was appointed to outline a training course which should be followed by all normal schools or other organizations which undertake to prepare teachers for the work.

Composing this committee were: Dr. Caroline A. Yale, of Northampton; Dr. Percival Hall, of Gallaudet College; Mr. E. McK. Goodwin, of North Carolina; Dr. Max A. Goldstein, of St. Louis;

and the late Dr. J. W. Jones, of Ohio. You will note by its personnel that it represented all major organizations of the profession.

The report of this committee was presented and adopted at the thirteenth meeting of the conference held at Frederick, Md., in 1926. It is generally referred to as the "Yale Outline" and may be found in full in the March number of the Annals for 1927.

The mere adoption of this outline, however, without any concerted plan for putting it into effect, did not settle the matter satisfactorily to all interested. It came up again at the fourteenth meeting of the conference held at Knoxville, Tenn., in 1928. The outcome of the discussion was the appointment of a committee composed of Dr. Hall, Dr. Harris Taylor, of New York; Dr. O. M. Pittenger, of Indiana; Dr. E. A. Gruver, of Pennsylvania; and Mr. H. M. McManaway, of Virginia, whose duty it was, "to communicate with schools and organizations offering normal courses, and, (1) find out what they were doing, how they were doing it, and to obtain a copy of their course of training; (2) to sound their attitude toward the adoption of the 'Yale Outline' as their minimum standard."

This committee gave its report at a called meeting of the conference held at the time the convention met in Faribault, in 1929. Dr. Hall reported that 21 schools or organizations were engaged in teacher training. A majority were already complying, or expressed a willingness to comply, with the Yale outline adopted at Frederick.

But there was no uniformity of method, no uniformity of purpose, no unified standard. Each school was a law unto itself. No provision for the issuing of certificates by any recognized authority was existent. The report of this committee may be found in the published proceedings of the Faribault Convention (Sen. Doc. No. 48, 71st Cong., 2d sess., issued Dec. 4, 1929), and in the Annals for November 1929.

A tentative agreement as to training requirements having been reached, the time was ripe for a plan of certification in accordance with the purpose originally held in view. At the fifteenth meeting of the conference held last fall at Colorado Springs, Dr. Hall, on behalf of the executive committee of the conference, presented a plan for this purpose as a "follow-up" of the work already accomplished by that body along these lines.

His proposal was the "appointment of a committee of five to seven persons (presumably a permanent committee) with power to act, representing various sections of the country; this committee should notify all organizations conducting teacher training that at their request and expense two or more members of the committee will make a personal visit, observe the work being done in the training class, check up on the course as outlined and as actually given, and make recommendations to the full committee. With the approval of the full committee, the organizations conducting training classes would be notified whether or not the work shall have the approval of the conference, and consequently whether or not diplomas may be issued formally stating such approval."

As I understand it, this simply means that approved organizations were to issue their own diplomas, signifying completion of the training course with the stamp of approval of the conference, much as in the public school system normal schools, complying with the State

law as to requirements, issue a diploma with the approval and recognition of the State. If satisfactory, the conference would then issue, or allow to be issued, a certificate. It was put before the conference in the form of a motion by Dr. Hall.

During the discussion which followed this report, Mr. McManaway, president of the American Association to Promote the Teaching of Speech to the Deaf, rose and informed the conference of action taken by his association.

The association had, acting on its own initiative, gone ahead independently, formulated and announced a plan of certification under its authority, certificates to be issued through the Volta Bureau.

In the subsequent exchange of ideas, it was suggested that some way might be devised for the two organizations to work together toward a common purpose, and Dr. Hall modified his motion to provide that by agreement of the committee any organization conducting approved training classes should be authorized to issue certificates to their graduates, and that they act with the executive committee of the conference, or with a committee appointed by the association.

This motion was carried and later the following members of the committee were announced: Dr. Thomas S. McAloney, of Colorado; Dr. W. L. Walker, of South Carolina; Supt. Alvin E. Pope, of New Jersey; Supt. Herbert E. Day, of Missouri; Miss Mabel E. Adams, of Massachusetts; Supt. T. C. Forrester, of New York; and Supt. F. M. Driggs, of Utah.

This is the situation as we find it today. Apparently it has resolved itself into a question as to which organization shall have the recognized authority to issue certificates that will command the respect and confidence of the profession as a whole. In view of the fact that the conference was engaged in formulating a plan for the same purpose continuing through several years, it is not clear what the association had in view.

It appears to me that there can be no valid objection raised against Dr. Hall's contention that the conference is the logical body in which to invest this authority since its members represent the employing members of the profession who will, in the final analysis, be the ones to pass on the qualifications of the teacher individually.

Taking up the proposition as it now stands, let me call your attention to several points which seem to me to have been overlooked in the association's plan.

1. Only one method of teaching is recognized. Inasmuch as the majority of schools are combined and use all methods, and as there are individual schools that use individual methods, to be scientifically correct, provision should be made to issue certificates covering all methods, a different certificate being issued to fit the graduate and the method if necessary.

2. As it now stands the deaf teacher is entirely without the pale. In State schools which must take in "the lame, the halt, and the blind", the deaf teacher is recognized in the scheme of universal education of the deaf and has a right to be included.

3. No provision is made for the vocational teacher. Yet he, too, is a part of the educational plan of the school. If we are to carry out the desire to raise the standard of our industrial work, we should

have trained teachers with a certificate issued in their particular field.

4. The plan of the oral association now offered provides for a "blanket" certificate. Should the teacher seeking employment in the high school be required to take the kindergarten course? As it now stands the proposed certificate would not qualify the teacher to meet the requirements in the high school and certainly not under the rules of the North Central Association of Colleges and Secondary Schools. Why not grade the certificates with different requirements for teachers in the kindergarten, the intermediate department, and the high school? Placing our schools under the public-school system as many are now doing will make this necessary. Colleges and normal schools issue a dozen different forms of certificates.

Another point not to be ignored is this: When you seek a college graduate for training, the first thing she will want to know is what salary is offered. And then, what are the opportunities for professional advancement? Will her training entitle her to preference in selection, position, and salary? Unless you are prepared to answer these questions satisfactorily you can hardly expect to raise your standards and draw into the work highly educated men and women so long as the public schools hold out greater inducements as they do now.

That the certification of teachers is very much to be desired is acknowledged without debate. But some assurance should be given that teachers holding certificates shall be given preference in appointment and standing. Otherwise it will not be sought.

With the successful operation of such a plan will come many advantages. Besides bringing a higher grade of men and women into the profession, it will bar the entrance of incompetents and the assimilation of misfits already in. It will give teachers themselves greater pride and satisfaction in their work, and it will encourage teachers to seek professional growth.

And, since much is at stake, the importance of the problem calls for action that is above professional criticism. While standards should be exacting, they should not be arranged for the benefit of only one group of the profession but should be inclusive and yet liberal enough in scope to enable all instructors rendering worthy service, regardless of method or department, to enjoy active participation.

Because it represents the profession as a whole, the logical authority for the fixing of standards and the issuing of certificates should be in the hands of the Conference of Executives, representing the appointive power. Its effectiveness will rest on the following fundamental considerations:

1. A movement of this kind, to be accorded professional recognition and confidence, should be conducted by an organization that is exclusively devoted to professional interests; an organization in which the membership is entirely composed of individuals professionally concerned in the education of the deaf. Since certification is properly a professional problem, this principle cannot be evaded.

2. It necessarily follows, then, that not only must the organization responsible for certification be in all respects a professional

body but the actual supervision of details of qualifications should be entrusted to individuals who are themselves, or who have been themselves, instructors of the deaf; this to make certain that the certification does not degenerate into clerical rubber-stamp approval.

3. To represent fairly the profession in its entirety, and the various schools of thought in particular, the function of certifying should be assumed by an organization that is not committed to any single method of instruction. This is but in keeping with the long-established principle set forth in the constitution of the Convention that it stands "committed to no particular theory, method, or system, and adopting as its guide the following motto: "Any method for good results; all methods, and wedded to none."

4. A comprehensive and equitable plan of certification should provide at all times for equal opportunity for registration of all engaged in the instruction of the deaf; that is, an opportunity should be afforded deaf teachers of the deaf to enjoy the benefits which may accrue from certification.

5. Any plan of certification, to be adequate, should also provide the opportunity of standardized registration for instructors in the vocational, in physical education, and in the art departments of the schools. Limiting the opportunity to academic instructors would be enlarging their relative importance to an unwarranted measure. Recognition of this principle will do much to raise these branches of the work, which until recently have not been given their merited share of emphasis.

The work of the Conference thus far has prepared the way for the adoption of a plan as shall embody these principles, and arrangements for carrying it out are already at hand.

1. *The committee on certification of teacher-training centers.*—This was appointed at the Colorado meeting of the Conference of Executives of American Schools for the Deaf in 1930, and which has been named above. This committee is unquestionably the agency best fitted to lay down requirements of education, special training, length of teaching experience, special fitness and fulfillment of obligations of contract, to include all branches of the work.

2. *The executive committee of the conference.*—This, since its inception at the very beginning of the education of the deaf in this country, has enjoyed the respect and confidence of all those engaged in the work. Upon this body then, in view of the importance of the matter, would naturally devolve the function of proceeding with the actual certification; that is, receiving and passing upon applications from all instructors who submit a statement of qualifications. With the approval of the conference, the executive committee should have power to issue certificates in accordance with its findings.

Following the foregoing statement and outline of principles a definite formula of qualification for certification is offered as a tentative basis for a working plan offered by the convention to be presented to the conference for its consideration, *viz*:

I. "Certified associates", to include:

1. Those instructors who have satisfactorily completed—

(a) A 4-year course of study in a standard college, professional, or technical school, graduating with a degree;

(b) A standard 1-year course of normal training in the education of the deaf; or a special 1-year course in the technic of vocational training; or, physical, or art education, or their equivalent; and

(c) Three years of actual teaching in a school for the deaf.

2. Those instructors who have satisfactorily completed—

(a) A 4-year course of study in a standard college, professional, or technical school; and

(b) A course in an approved summer training center in the education of the deaf; and

(c) Five years of actual teaching in a school for the deaf.

3. Those instructors who have satisfactorily completed—

(a) A 4-year course of study in a standard college or technical school, and

(b) Ten years of actual teaching in a school for the deaf.

Instructors who meet the requirements of any of the three classes referred to above, and who have fulfilled all obligations of contract in schools for the deaf, shall be registered as certified associates (C.A.), and they shall be so designated in the annual directory of instructors of the deaf in the January Annals.

II. "Accredited associates", to include:

1. Those instructors who have satisfactorily completed—

(a) A 2-year course of study in a standard college, professional or technical school, and

(b) A standard 1-year course of normal training in the education of the deaf, or a special 1-year course in the technique of vocational training, physical education, art education, or their equivalent, and

(c) Three years of actual teaching in a school for the deaf.

2. Those instructors who have satisfactorily completed—

(a) A 2-year course of study in a standard college, professional or technical school, and

(b) A course in an approved summer training center in the education of the deaf, and

(c) Five years of actual teaching in a school for the deaf.

3. Those instructors who have satisfactorily completed—

(a) A 2-year course of study in a standard college, professional or technical school, and

(b) Ten years of actual teaching in a school for the deaf.

Instructors who meet the requirements of any one of the three classes referred to above, and who have fulfilled all obligations of contract in schools for the deaf, shall be registered as accredited associates (A.A.) and they shall be so designated in the annual directory of instructors of the deaf in the January Annals.

III. "Associate instructors", to include:

1. Those instructors—

(a) Whose educational preparation measures up to at least 4 years of high-school work, and who have satisfactorily completed—

(b) At least 1 year of normal training in the education of the deaf, or a special 1-year course in the technique of vocational training, or physical, or art education or their equivalent, and

(c) Who have satisfactorily completed 3 years of actual teaching in a school for the deaf.

2. Those instructors—

(a) Whose educational preparation measures up to at least 4 years of high-school work, and who have satisfactorily completed

(b) A course in an approved summer training center in the education of the deaf, and

(c) Five years of actual teaching in a school for the deaf.

3. Those instructors—

(a) Whose educational preparation measures up to at least 4 years of high-school work, and who have satisfactorily completed

(b) Ten years of actual teaching in a school for the deaf.

Instructors who meet the requirements of any one of the three classes referred to above, and who have fulfilled all obligations of contract in schools for the deaf, shall be registered as associate instructors (A.I.) and they shall be so designated in the annual directory of instructors of the deaf in the January Annals.

If it is in order to do so now, I move to adopt the following resolutions:

Resolved, That the members of the Convention of American Instructors of the Deaf go on record as favoring the adoption of a plan of certification under the authority of the Conference of Executives of American Schools for the Deaf, and

Resolved, That the above outline be approved by the convention and submitted to the conference at this meeting for immediate action as the basis of a working plan; and

Resolved, That this plan be published in the next number of the Annals.

Mrs. RIGGS. I second the motion Dr. Long has made, and request the privilege of discussing it.

Dr. McALONEY. You have heard the resolution moved by Dr. Long and seconded by Mrs. Riggs. We shall now give Mrs. Riggs the privilege of discussing it.

DISCUSSION OF DR. LONG'S PAPER ON CERTIFICATION

By Mrs. B. M. Riggs, of the Arkansas School, Little Rock, Ark.

As one may readily observe from Dr. Long's paper, it is high time that this thing of certification of teachers were, to a degree, settled, instead of being perennially considered. While so much time is being given to this subject—important as it is, many phases of our work of perhaps equal importance go begging: Teachers' retirement, the raising of standards of supervisors who spend more time with the children than do the classroom teachers, the checking up on results of the different methods of education in the post-school life of the child, the question of the placement and economic adjustment of deaf boys and girls as they graduate from our schools, the question of proper curricula for the Negro deaf in different sections of the country, the question of schools for the deaf which admittedly do not accept all the mentally normal deaf applicants of school age, the question of the misfits who do not really belong in a school for the deaf, but whom we so often find there. It is high time, I repeat, that our opinions concerning this matter of certification be crystallized to such a point that the matter may be definitely delegated to a board of certification for future action.

Desiring to discuss Dr. Long's paper impartially, I wrote to a number of superintendents, who, I felt reasonably sure, were interested enough in this subject to have definite ideas as to what should be done. From their replies, which ranged from terse statements to lengthy arguments, I can say with assurance that Dr. Long's resolutions embody what the superintendents in general think is the proper plan of certification: First, a certification under the jurisdiction of the Conference of Executives of American Schools for the Deaf; second, a certification providing for all groups of teachers engaged in the education of the deaf.

Among these opinions, a minority indicated that the Convention of American Instructors of the Deaf should serve as the certifying agency. For the Convention to take over this responsibility does not seem logical. The Convention is a body whose membership is composed largely of teachers and a certification by the Convention would mean, in effect, that teachers were certifying themselves. As one superintendent writes, this sort of certification would be similar to "having a branch of a State teachers' association (hearing) actually certificating themselves. There would be no recognition of this." The same argument would hold against the vocational teachers organizing and certifying themselves, the deaf teachers organizing and certifying themselves, and the speech teachers organizing and certifying themselves.

An argument in favor of having the Conference of Executives certify the teachers, as embodied in Dr. Long's resolutions, is this: As the present system of education of the deaf is organized, no form of certification can be binding on these executives. A certification plan to be of value to the rank and file of teachers must be a plan to which at least a majority of school administrators can subscribe whole-heartedly. Otherwise it will carry too little weight for teachers seeking positions, a major consideration.

Certification by the Conference of Executives would not necessarily rule out certification by other agencies. We find frequent instances of more than one type of certification being recognized by the administrators of public school systems. Speaking from the point of view of a superintendent, I wish to say that a certificate from the Teachers' Training College of Central Institute, affiliated through the able work of Dr. Goldstein with Washington University, would indicate to me that the teacher possessing such a certificate had had training par excellence. The same would be true in the case of a teacher bearing credentials from the summer school of the American Association to Promote the Teaching of Speech to the Deaf which has the enviable distinction this summer of being an integral department of the Johns Hopkins University. The fact that such training centers as these are now connected with recognized colleges adds dignity to their work and is making such action on a smaller scale possible in the smaller training centers such as are conducted at a number of the State schools.

At present the only general agency for certification of teachers of the deaf is under the jurisdiction of the association. I have reason to believe that the leaders of that organization would not consider it an infringement upon their field of endeavor should the convention or conference see fit to adopt and put into effect a plan of cer-

tification broader in scope than the one the association has evolved to set standards for its own type of teacher.

Writes Mr. McManaway, president of the association:

If I were planning to participate in the discussion myself, there are two or three things which I would emphasize:

1. That the plan was conceived as a form of service which the association might render its own membership, consisting largely of teachers of the deaf scattered throughout this country. While any well-considered plan of certification which might be put into operation would contribute to the upbuilding of the profession as a whole, the association felt that it might be considered presumptuous to put into operation any plan of certification for any other than its own membership. It desired to avoid criticism along this line; hence the service was offered only to its membership, though at the same time the association invites everyone who believes in the teaching of speech to the deaf to become member of the association. * * *

2. Inasmuch as the association, as indicated by its constitution and its charter, was organized to promote speech and the oral teaching of the deaf child, the certificate is issued to those who have attempted to qualify themselves as oral teachers. If the charter of the association had been broader in its scope, unquestionably the types of certification offered would have been broader. This matter came out very clearly in the discussions preceding the adoption of the plan when an amendment of the plan was offered, providing for the certification of manual teachers and vocational teachers. But it was argued, in explanation of the limited type of certification offered, that under its present constitution the association was primarily interested in oral instruction and the promotion of oral teaching, using this term in its broadest sense, but not in any narrow sense that the association did not recognize or would refuse to recognize other types of instruction, and certainly not that it would in any way minimize or discredit the value of vocational training.

With this frank and gracious statement of limitation in field of endeavor on the part of this progressive leader in the association, members of the convention and members of the conference should recognize the fact that the burden of a plan of broader certification lies with them.

That certification of vocational teachers is needed, no one can deny. The phase of education with which they are concerned is of equal importance to that of academic teachers. There are those who may disagree, but the average person, if deaf, would far rather be able to make an independent living than to know how to solve algebraic equations, recite at length the events of history, or display great skill at speech and speech reading. High standards of training are just as necessary for an efficient vocational teacher as for a teacher engaged in any other branch.

The need of certification also applies to teachers of manual classes, most of whom are deaf men and women of superior mentality, a majority of them graduates of Gallaudet College. We recognize the deaf teacher's inspirational value to the deaf boy or girl, who must make the same adjustment to life in order to attain normalcy as the teacher himself has made, a sort of adjustment to which far too many of our hearing teachers fail to contribute.

Finally, will the conference take over this responsibility, a responsibility which will entail the expenditure of much effort, with which there will need be a concomitant of wisdom and foresight? We need not fear that the conference will not assume this responsibility. The concrete plan which Dr. Long has presented was worked out by a group of executives particularly interested in this matter. Your adoption of Dr. Long's resolutions at this time means, in

effect, that the conference will have the assurance that it has the support of the convention, should the conference see fit to adopt this proposed plan of certification.

Mr. CLOUD. I just want to state concerning Dr. Long's paper on certification that I read the program before and since coming here and feel there was nothing to indicate that any official action was to be suggested at this time, and certainly no opportunity has been given to anyone to consider the advisability of such a plan. As I recall it, it is just about as complicated as the other plan which was adopted by the association. Personally, I believe the taking over of the matter of certifying teachers is not the business of any organization which is voluntary in its membership. I don't think it should assume such a risk and I question seriously whether this would be the proper time to adopt such a resolution as is presented, and wish to offer a substitute motion that resolution no. 1 be adopted, with instructions to the committee to report back to the next meeting of the convention with a definite plan, and that resolutions nos. 2 and 3 be laid on the table.

Dr. HALL. It seems to me that is a combination of motions that is very difficult to test. The motion to lay upon the table is not open to discussion. A motion to adopt a certain section may be open to discussion. Would Mr. Cloud make those in separate motions?

Mr. CLOUD. Well, I will move, Mr. Chairman, that the entire resolution be laid upon the table and that a committee be appointed, as suggested in Dr. Long's paper, to report back to the next convention a definite plan whereby the membership will know just what is being proposed and the reasons therefor.

(The motion was seconded.)

Mr. BJORLEE. I don't believe we are expected at this time to act upon, or accept, the many suggestions that were made in Dr. Long's paper. Dr. Long has given us a plan to discuss and consider. We have been thinking about this thing for a matter of about 10 years, and we have been criticized most severely for not doing anything. If we are going to wait till 1933 we are only deferring again a thing we can do at this time. All that Dr. Long's paper asks is that this body ask the conference of executives to adopt some plan of certifying teachers. Now, the only thing we are doing, if we accept that, is to invite them to do it. Then the ways and means of doing it will fall upon them and we will have 2 days here to discuss and deliberate on that. I think it would be a very serious mistake if we table this motion now.

Dr. LONG. Have we not waited long enough? We want action. We have waited and waited and waited, and we want to see something done. All I ask is that that proposition be supported by the convention. We have a right to express our opinion, and we want to do it now. We want that resolution passed right away.

Mr. CLOUD. I think Dr. Long misunderstands me as much as I, apparently, misunderstand him on this proposition. I think the conference of executives should control the certification of teachers. The point I am objecting to is that he has submitted a plan as a working basis which seems rather complicated. You have 10 years and 3 years and 2 years, and this type of certificate and the other type of certificate. Why not let the resolution stand for the appointment

of a committee authorized to work out a plan, without any basis, without any foundation, and then let it report back to the next meeting of the convention. We believe we have a good plan in our State, and there are some features in this plan that I am not so sure I would be willing to subscribe to. I merely ask that the first part of his report be adopted. I am entirely in accord with it, but I hardly think the working basis is necessary at this time. We have waited a long time. Why suddenly make haste now? I don't think anyone in the room knew such a thing was going to be proposed. There was nothing in the school papers to indicate what would be submitted, and I don't know that our people in Illinois would support this.

Dr. McALONEY. Your motion is that we adopt the first resolution and table the other two?

Mr. CLOUD. That was my first suggestion. I understand that cannot be done, so I have to substitute the motion that we table Dr. Long's resolution entirely.

Mr. E. McK. GOODWIN, of North Carolina. If it is permissible at this time, I would like to change Mr. Cloud's motion by moving that we adopt the first section.

Dr. McALONEY. Is that agreeable to Mr. Cloud?

Mr. CLOUD. Yes.

(The motion was seconded, put, and carried unanimously.)

Mr. BJORLEE. I move the adoption of the second resolution.

(Motion seconded.)

Mr. TRAVIS. One of the propositions made by Dr. Long was that there be so many years, or the equivalent of so many years, of high school or college instruction, and followed by so many years of service. That is all right as a plan on which you will admit new teachers coming in for certification. One of the conditions is that there shall be 10 years of actual satisfactory service as a teacher of the deaf, plus the other provisions. The proof of the pudding is in the eating thereof. If a teacher has served 10 years successfully as a teacher of the deaf, what more do you want to certify him as a teacher of the deaf? Any teacher who has served 10 years in a school and the superintendent has let him serve, that in itself is certification that he is satisfactory, or there is something wrong with the superintendent. I say that 10 years of actual service ought in itself to be a basis for certification. You may add all these other things to the new ones coming in, but I will not vote for this recommendation to the conference as long as that condition stands.

Dr. HALL. May I say to the convention, and to Mr. Travis in particular, that there is no intention to bind the conference. We cannot bind the conference. We are simply proposing a basis for the conference to start with, and as I heard Dr. Long's plan and as I read it—he gave it to me the other day—it seemed to me it was a fairly reasonable plan. No doubt, they will make changes in it. We are simply presenting this to them to study and if they want to make changes, it is up to them. I sincerely hope the conference will have some support as to what this body desires.

Mr. TRAVIS. I am objecting to this Convention of American Instructors of the Deaf endorsing that as our plan. I insist that 10

years of actual successful teaching is a basis in itself and I don't believe in Dr. Long's plan for that reason.

Mr. DAY. The final action, itself, comes from the conference. We simply vote to pass it on to the conference.

Mr. GOODWIN. I think there are a good many things in the resolution well worth while, but I do fear it is too complicated as to many of the conditions. The plan carries so many conditions that I fear a good many of the teachers who have been in a long time and done very efficient work, might meet some difficulty in it. I think it would tie the hands of the proper committee which we have already recognized in this certification. I would not be in favor of the second and third of these resolutions. I fear it would tie their hands and start out from the beginning with some phase of disagreement and friction.

Mr. TILLINGHAST, of South Dakota. I think there ought to be something of this kind and I have a great deal of sympathy for Dr. Long's desire for action now, today. At the same time I realize this is a very important subject and one where hastily drawn plans might defeat their own purpose. I think the convention should be given a chance to study it very carefully before passing upon it. When the association plan was presented at Milwaukee a year ago, I moved a resolution that they defer action and submit that plan to the conference of executives for their approval before taking official action. But they were in a hurry. They said they wanted action right then. They said: "We will go ahead and pass our plan. We cannot wait for the conference."

I can heartily endorse the first resolution. As to the second and third, I feel very much in agreement with Mr. Goodwin. I will say this: If we vote favorably on this resolution, it should be with very strong emphasis on the word "basis", that we are furnishing a plan as a working basis for the conference to determine and work out the final solution. Under the circumstances, I shall vote for this resolution, but with the explanation that I have not given this plan sufficient study, and I don't think any other teacher here has had a chance to do so, and with the understanding that it be given to the conference as a working basis only and that they shall have the utmost freedom to determine what shall be the final conditions.

Mr. A. E. POPE, of New Jersey. I move that we amend the second resolution by substituting "as a basis for study", instead of "as the basis is of a working plan."

Dr. HALL. I second Mr. Pope's motion. That offers it to the conference as a suggestion. In any case, we cannot bind the conference, no matter how we vote.

E. A. STEVENSON, of California. This whole thing seems to me to be rather amusing. In the end the conference of executives will finally endorse the requirements for teachers. That lies in the hands of the conference, and it is not subject to any association or any convention, so why should the association proceed to make up requirements and pass them hastily? The convention has the right to pass upon these requirements. These are not any more complicated than the others, not at all. It is the fear of one association against the other. That is why you people have suffered all these years. If

these people got together and worked with the conference, where all these things belong, we would not have these debates and discussions.

Mr. A. J. CALDWELL of Louisiana. I feel somewhat at home when you talk about the certification of teachers. It was my privilege to work for a number of years as chairman of our State committee to work out a plan for certification of public school teachers, so I am speaking of something with which I am fairly familiar. I agree thoroughly with the one who said it will not get us anywhere to pass a complicated set of plans for study by somebody else, who has to make out a different plan, or a new plan, or part of a new plan. I therefore feel that the best thing we can do with the second and third resolutions is just to fail to adopt them. Whether we adopt or do not adopt the second and third resolutions, everything that has been said here will be available to the conference, I understand, and the members of the conference will be authorized and directed to work out a plan of certification. That is why I am against the second and third resolutions.

Dr. McALONEY. We will now take a vote on the motion as amended by Mr. Pope.

(The motion was put and carried unanimously.)

Dr. HALL. I will move that we adopt the third resolution.

(The motion was seconded, put, and carried.)

The convention then heard a splendid address by Dr. W. A. McIntyre, principal of the Normal School of Winnipeg. The subject of Dr. McIntyre's address was The Spirit of the Modern School.

WEDNESDAY AFTERNOON SESSION

ART SECTION

The meeting of the art section was called to order at 1:30 p.m. by Mrs. Hazel T. Craig, of Gallaudet College, Washington, D.C.

Mrs. CRAIG. I wish to thank the officers of the Winnipeg school for the splendid manner in which they cared for the exhibits. The latter are arranged very artistically in the girls' gymnasium, where you will also find free educational literature.

Superintendent Pope, of the New Jersey school, asked me to announce that in the national flower appreciation contest, open to all public-school children, Nina Filipowicz, age 17, won first New Jersey prize of \$50 for herself and \$25 for the school. Katie Dobos, age 14, won fourth prize of \$5.

For the first part of our program we have a paper on Why Teach Art by Miss Llewellyn.

WHY TEACH ART?

(By Miss GENEVA B. LLEWELLYN, of the Wisconsin School, Delavan, Wis.)

In presenting this subject I have tried to approach it from the standpoint of the average pupil rather than the gifted one. The real object of an art course is not to discover the exceptional pupil but to give to the average pupil skill which may be applied in many fields.

The reason for many of our courses of study is that these subjects have been taught successfully in other schools. This is not a sufficient

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reason, and there has been a growing feeling among educators that education is not a local matter but that there are national ideals toward which we must work. From the bewildering mass of subjects and activities which confront the head of a school, he must select those which may be used most effectively to develop the type of citizenship proposed as the American ideal.

A short time ago a group of educators set forth as the main objectives of education the following: First, health; second, command of the fundamental processes; third, worthy home membership; fourth, vocation; fifth, citizenship; sixth, worthy use of leisure time; and seventh, ethical character. It is my desire to show how the teaching of art in our schools fulfills the requirements as outlined in this list of objectives. If this can be done, we have a sound answer as to why we should include art in our school curricula. Let us see then how art, as it is now taught, may be justified according to these standards.

1. *Health*.—Is it possible that the study of art and its allied activities can affect the life and well-being of the average child in school or the citizen after he leaves school? To write or read about the fly-borne infection of disease is generally dull and uninteresting, but an effectively colored poster, graphically portraying flies traveling from the sick room of one child to the food on the plate of a child in a neighboring home, will leave a lasting impression. To tell how good food makes good bodies and that milk is essential to the health of the child does not arouse or hold interest, but there are numberless ways by means of posters to effectively put this idea across. Lectures about decayed teeth may not be remembered, but a story in pictures will make the child think, and the toothbrush will become a habit.

A child thinks hard when he has a definite problem to solve, and a child who carries the project of a health poster to a conclusion will be definitely impressed with the importance of the lesson he undertakes to illustrate by means of his poster.

2. *Command of the fundamental processes*.—The uses of skills and motor controls acquired in the study of art for learning, employing, and fixing the command of various fundamental processes are too numerous to discuss here, but let me remind you that art as it is now taught and studied in our schools affords an excellent aid in the development of the powers of attention, accuracy, observation, perception, comparison, discrimination, and original thought. Every child who participates in the production of a poster or picture cut-out learns the value of concentrated attention to the task at hand, the necessity of accuracy of representation, and exercises, and thereby develops his powers of observation, comparison, discrimination, and imagination. In art study a child learns to do, his inventive power is stimulated, and his imagination challenged. He finds joy in creating.

3. *Worthy Home Membership*.—Carolyn Jenkins says: "We are all designers, whether we want to be or not. When we dress ourselves, buy a hat or tie or select materials; when we set a table, arrange a bouquet, plan a garden, hang a picture, or write a letter, we are designers. When we build houses or factories, decorate a shop window, or write an advertisement, we become designers. The

home reflects the taste of the housekeeper, just as the costume reflects the taste of the wearer. So in the final analysis we must all be designers and artists when we take our places as members of a household. There is furniture to buy and arrange and the home to be decorated. The study of art fosters and develops that discrimination which sees a pleasing harmony in certain color combinations and rebels against the jarring discord so often seen in women's attire and home decorations. Is it not worth while, then, to teach our children to be designers?"

4. *Vocation.*—There is no vocation known to man that is not naturally influenced by art. The work of the butcher, the baker, the candlestick maker, and all the rest are dependent upon art and the knowledge and practice of its fundamental principles. Sometimes the pupils ask, "Why is art necessary?" A few years ago the school arts magazine printed a design which was named "The Art Tree." Art was the trunk or body of the tree, and its branches represented the industries dependent upon the arts. One of my boys enlarged the design for our studio and I find it a most graphic way of answering the question as to why art is necessary. It is art that governs the design of a lady's necklace as well as the plan of a battleship. It is art that produces pleasing effects in wallpaper and silver. Art is involved whether the job at hand be the design and construction of a simple bungalow or the giving of grace and beauty of proportion to a great mansion. Illustrations could be cited almost without end.

5. *Citizenship.*—The happy citizen is a good citizen. If a man comes from a comfortable, artistic, and congenial home atmosphere, works at his chosen vocation in pleasing surroundings and moves about among his fellows in a community where the streets are broad and buildings well proportioned and artistically planned, and where the beauties of nature are in evidence, he is pretty sure to be a happy, and therefore a good, citizen; in short, the citizen on which our country depends for its continued existence.

If he does not have such an environment, he is very apt to acquire a warped idea of the relative values of life. To realize how vital this is, we have only to recall the type of home and living conditions that have produced the majority of our criminals.

The appearance of a place of business reflects the taste of its owner, the farm reflects the sense of pride of the farmer, the cleanliness, order, and beauty of a town reflect the appreciation and good taste of its citizens. These standards of good taste are taught by the practical application of the fundamental principles of art, color, line, form, harmony, contrast, and proportion. These principles are taught in our art courses. The organized interweaving of art problems with the industrial requirements of the country should give the child an appreciation of the value of industries and a greater knowledge and interest in them, as well as a practical application of, to all walks of life.

6. *Worthy use of leisure time.*—How tremendously important it is in an age when the amount of leisure time at the disposal of all mankind is increasing that we should educate our children to the most worthy use of that leisure. We live in two worlds. The most obvious and ever present is the one in which we work, eat, sleep, and dodge flivvers. There is however, another world, one created by men and women of imagination. The great writers, musicians,

and artists have helped create this other world, and in our leisure hours we may enter it through our imagination and appreciation if we have been educated to the proper use of that leisure time. Here we may, according to Henry Turner Bailey, "see the skies of this beauteous realm from the brush of Turner, Corot has painted its shady nooks and little pools reflecting the sky, Fritz Thanlow its rivers and streams, and Van Dyck its immortal emperors and kings. We can see its people live in fadeless youth on the canvases of Raphael and Reynolds; we can live with peasants through the genius of Millet or know the animals of this great world through the eyes of Landseer." Denied music, art then is doubly useful to our deaf children in training them for worthy use of leisure time.

7. *Ethical character.*—Some years ago a great commission stated the goal of education in a democracy in these words, "Education in a democracy both within and without school should develop in each individual the knowledge, interests, habits, ideals, and powers whereby he will find his place and use that place to shape both himself and society toward ever nobler ends."

If we are to attain the goal just stated there must be a development of ethical character. Character, education, and religion are ever closely linked together, and art has been one of the most powerful influences in both. No child can be properly led through the study of a great masterpiece without learning the lesson the artist intended to teach with the universal language of the brush. And the lessons learned from such a study will make for the better development of character. George Frederick Watts said in speaking of his painting "Hope", "My intention has not been so much to paint a picture which will charm the eye as to suggest thoughts that will appeal to the imagination and heart and kindle all that is best and noble in humanity." Such is the message of beauty to humanity. It is the soul of the picture that strengthens character.

We have art in our schools because it aids in attaining the objectives in education. It assists in teaching lessons of health. It facilitates the instruction in tool subjects. It trains the child for worthy home membership and enhances his value in his chosen vocation and teaches him more worthy use of his leisure time, as well as developing in him a finer character.

I believe art has demonstrated that it can do all these things and is therefore deserving of a place in the curriculum of every school for the deaf. However, art education, to secure a dignified position in our schools, must recognize and follow the fundamentals of any great science, even though it may follow new avenues of research and thought. And, above all, spectacular results, attraction through frenzied forms, blatant colors, and grotesque representations must go if art in our schools is to continue toward complete acceptance.

And now I suggest that the art teacher have as an aim in teaching not only the development of appreciation, taste, and skill on the part of the pupil but also the development of the attitude of cooperation, responsibility, professional spirit, habits of accuracy, neatness, and conduct as applying to his needs for filling his place in society. In doing this we shall be trying to attain the ultimate aim of art education—the teaching of the fine art of living.

Mrs. CRAIG. Miss Agnes Hammell, of Winnipeg, will now give an address on picture study in our schools.

TEACHING ART APPRECIATION IN OUR SCHOOLS

By Miss AGNES HAMMELL, Supervisor of Art, Winnipeg City Schools

A group of students once met to discuss what memento they might leave their alma mater. One suggested that they buy good copies of great masterpieces. "No, no", replied a cynical youngster, "not pictures for the professors—to enjoy them you have to be educated."

Without in any way sharing his satirical cynicism, we may nevertheless uphold the truth of his statement. We know too well of tourists, of a certain type, who boast of "doing" the National Gallery in half an hour or the Louvre in 20 minutes. Others complain of the horrors in the art galleries and criticize the works of Botticelli and Fra Angelico. The drawings of these are incorrect, it is true, but they are considered masterpieces for other reasons than drawing.

It is incumbent upon us that our pupils be educated to appreciate and to understand beauty. Nor is this a plea that they may go forth some day and prove that they are as educated as others.

Our aim in the teaching of art in our schools is not the aim of the art schools which teach art alone. We aim to educate through art, not to make artists, and in this education through art the study of good pictures is important. Then comes the cry, "How shall we teach picture appreciation? What method should we use?" It would be foolish to give any particular method and say, "Do it this way."

Picture study develops the child by bringing him from the observation of concrete objects to the consciousness of emotional appeal.

The method here suggested divides into three sections:

Objective, dealing with grades 1 and 2.

Subjective, dealing with grades 3 to 6.

Composition, dealing with grades 6 to 8, and up.

The objective section deals with the question, "What do you see in the picture?" Let the child see for himself and tell what he sees. He may not see what you see. The picture should be displayed for some time before it is discussed, thus giving the child time to study it more or less unconsciously.

Questions dealing with the time of day, the season, the number of people, and so on, are useless unless the picture is being used for a language lesson, or if the child is very backward and not normal.

Don't tell the children what they see; let them tell you. Don't give them crutches when they have two good legs.

There should be just one question, i.e., "What did you see in the picture?" The undeveloped child will simply enumerate objects. "I see a house, a dog, a boy", and so forth. A more developed child will connect what he sees into a more story-like form, i.e., he sees the intelligent relations of objects.

The subjective division deals with emotional appeal. In nearly every picture there are actors, either animals or human figures. Every picture evokes some feeling. It is surprising how children develop when they become conscious of the abstract. Only the intelligent child will react quickly to the emotional appeal of a picture. Be a wise teacher and let him have his own reactions. If he cannot express himself, it shows that he is not conscious of his emotions.

Show him two pictures with opposite appeal, say, one of a gory battle scene and the other a calm pastoral landscape. He will then detect a difference in his feeling toward each type of picture. Thus, he will realize that there is other feeling than just feeling with his fingers, or the nip of frost on his nose; that there is a feeling that stirs within him.

If he is slow, don't nag him, and do not be impatient with him. Always be satisfied with him and encourage him. After all, they are his reactions and no two children are exactly alike. Try to awaken his sympathy. Sometimes a child's reactions show that his early education has not been good. Some of his feelings may not be "quite nice" but they may be quite natural. Keep tab on your pupils by jotting down these little things in a notebook, so that they may be corrected and a new set of better ideas be given to him.

The third section deals with composition and first we must make sure that the children understand what we mean by composition. Every word must be understood. We should take it for granted that some one doesn't understand. Our business is not what they know, but what they don't know.

In their language work they have become familiar with the word composition; they have learned subject, paragraph, form, and so on. In a picture the artist writes his story with a brush; in a story, composition is the arrangement of ideas in paragraphs. In a picture, composition is the arrangement of ideas on canvas. Two artists may take the same subject, have the same ideas, use the same mediums with equal skill, but because they are two different persons, the composition will be different and one may be a masterpiece and the other just simply a picture.

There are three fundamental laws of composition—balance, harmony, rhythm. The great artists had an instinctive feeling for these basic laws; that is why their pictures have lived.

Balance.—Children have already fundamental ideas about balance. The idea of balance we ordinarily connect with the idea of weight. Now weight is simply the force felt as the earth powerfully attracts to itself any object which we hold or weigh. Let us carry the idea of "attractive force" into another field. In any picture, every item obviously has a definite attractive power; in the measure that objects attract our attention we say that they have weight or attractive force. Counterpoising attractive forces, we secure balance.

This point may be made clear to students if we draw their attention to the principle of the steelyard or the teeter-totter. They can easily understand how a boy of 60 pounds will balance perfectly with another of his own weight. But how may one of 45 be made to balance with one weighing 20 pounds more? Their own experience proves such a thing possible "if the little fellow gets more board", i.e., if he be farther removed from the pivot. This is a fundamental principle and holds in any other field. In pictures it is a matter both of experiment and of observation that the farther from the center of the canvas or the more isolated an object is, the more does it gain in weight or attractive force. Thus may a large object, but a short distance from the center of a picture, balance with a much smaller one on the other side farther removed from the center.

To mention again the teeter-totter, it illustrates for us another point, and by far the more important. The pleasure in teetering is one of feeling, and it is essential that young students should develop, not the false notion that objects in a picture must be weighted or their size compared, but the realization that their attractive force must be felt.

Show pictures illustrating this law of balance, where the larger object is nearer the center and the smaller has more board, or, in other words, is placed further from the center. Pictures demonstrating this are: The Balloon, by Dupré; Ruysdael's Mill. Pictures demonstrating balance secured through color: Turner's Fighting Teméraire. Balance secured through light and shade, Knight's Calling the Ferryman; Corot's Dance of the Nymphs.

Harmony.—Harmony in art is not essentially different from harmony in any other department of life. Music defines harmony as "the agreement of two or more sounds." In life it means non-discord, thanks to agreement of ideas—or ideals.

Supplying ready-made definitions, however, is not the best thing for any class. It is interesting to approach the idea of harmony indirectly: Distribute long narrow slips of paper $8\frac{1}{2}$ inches by $3\frac{1}{4}$ inches, and, without further remark, ask the pupils to sketch a tall vase. Rarely will 100 percent of an inexperienced class turn the paper lengthwise for their drawing. Without comment or correction, distribute papers of the same size, but this time present for drawing a bowl or vase wider than deep. Display the drawings in each case and discuss the arrangement. The word "agreement" will easily find its place in discussing shapes, and pupils will realize that the line of the frame should be in harmony with the line of length or breadth of the object.

Harmony of shape applies not only to the frame of the canvas, but also to the construction in the picture composition. Turn to Millet's Woman Churning. Draw a straight line from the cat's paw to the woman's shoulder and cap, and on the other side a second line skirting the side of the churn. Here the churn shape is repeated, or, continuing the lines, two triangles are suggested. This type of construction in picture composition is common and is termed "pyramidal composition."

Rhythm.—No pupil is ignorant of the meaning of rhythm, yet perhaps not one could express it in words. Let them express it as they can. Ask them to show with the hand any form of rhythm. Every hand will move; some will move up and down; others will swing from right to left; and these movements they will repeat over and over. Here is our definition and the very best one: Rhythm is movement, more than that, it is related movement. Proof of this last can be well illustrated by a border.

Sketch two border designs, one (*a*) with a flowing rhythm, the other (*b*) lacking this quality. Pupils easily discover which of the two is more pleasant and can detect within themselves the feeling of ease felt in the rhythm of (*a*) border. Occasionally a pupil will prefer (*b*) and not from a spirit of contradiction. He chooses it because it best expresses his own state of feeling at the time. To hint so produces a smile and not infrequently a little medicinal light that does more good than harm.

As a further illustration that movement should be related, sketch a border where the motifs are separated by too large a space. In such cases the eye must jump from shape to shape, and this is to the eye as unpleasant as the real feat in life would be to any indolent person. The eye prefers to travel easily. Study the lines in Raphael's Madonna of the Chair. Not only is there easy transition from one line to another, and therefore from one object to another, but the lines suggest circles, echoing the line of the circular frame of the picture. Burne-Jones' Golden Stair is another excellent example of rhythmic line.

We have made together a very rapid review of the general principles of good picture composition. Should we satisfy ourselves with showing pupils only those pictures which illustrate the various points in question? We have pupils from practically every race. Why not present in chart form the list of names of the more famous artists who have made illustrious the several nations whence they come, and show as many copies of their masterpieces as possible? It will give inspiration of the right kind; it will suggest to our youth what perhaps they, too, may do. Such a list as suggested, if presented chronologically, will at least have intelligent meaning.

The one here presented is incomplete, but it has an advantage over a too detailed list which could easily be overcrowded with names and dates.

The lists may be added to or names of artists substituted at the wish of the teacher. Such choice is personal.

Mrs. CRAIG. We shall now hear a paper prepared by Mrs. Isabel K. Noble on correlating the work of the arts department with that of other school departments.

ART CORRELATION WITH OTHER SUBJECTS

By MRS. ISABEL K. NOBLE, of the New Jersey School, West Trenton, N.J.

The education of every child must have a goal, and that goal, training for his or her future life in a community that will be influenced by factory output and huge groups of people working together on the sectional production of a whole object.

Psychology no longer contends that a subject studied as a child will automatically take care of all other related subjects. Psychologists now claim material must be presented in the way it is to be used in after life, if a prompt, correct recall is to be expected when the need arises.

Any normal life may be divided into three phases—vocational, avocational, and leisure—each phase taking its portion of the day according to the individual's life station.

It is conceded by all that vocational work necessitates working with other individuals and other departments. An avocation or hobby may be pursued alone, but contact with others is often necessary. Leisure hours could be occupied in solitude by the rare individual whose own society is sufficient for his needs. However, man is gregarious and seeks the companionship of others.

An educational system's first job is, therefore, to teach the child to cooperate and work with, first, other individuals in his class, other classes in the department, other departments, and finally with the outside community.

Thus correlated departmental work is very necessary in the training of the future adult.

The amount of correlation possible in any school is governed by the number of departments and the type of instructors in that system. However, even in a school with only a few departments there is untold benefit to be derived through the correlation of art.

The best way of illustrating correlation will be to give a résumé of the type projects finished during the past year in the New Jersey School.

In correlation with the academic department, geography maps were made in the schoolroom and painted with oil colors, and the color harmony was supervised by the art department. Plan drawings were made by advanced boys to help in the language instruction of the smaller children. Yearbook folders were made and decorated by the primary children to carry their school work home.

The photo-engraving instructor wished to teach halftone engraving, so a charcoal drawing was made of a statue which stands on the school lawn. The reproduction is to appear in the June issue of the Jersey School News. A series of drawings was made illustrating the types of work the boy must know in photo-engraving and these drawings incorporated in a group of lesson sheets to be used in teaching and illustrating shop language and photo-engraving technique.

When color-plate practice was needed, the Jersey School News cover was used as the motivation. This project necessitated the cooperation of several departments. The design was made in the art classes and a line cut in the photo-engraving shop. The next step was the color scheme, planned by the original designer in the art department. The copy then went back to the photo-engraving room for three color plates to be made. The print-shop boys next mixed the inks and printed the covers. As it was impossible to produce the flesh color on the figure with only three color plates, the intermediate girls painted this section with water colors.

The cover was sent back to the print shop and the copy inserted; then it was distributed to the parents, interesting them in school projects and thus carrying the child's work outside of the school.

In correlation with extra curricular activities posters were made for swimming, baseball, plays, and a seal designed for club stationery. Column headings were made by some of the boys when they wished to submit club news for publication in the paper. Posters were also made for the reading club.

A few of the boys have lined or lettered articles made in the wood shop, such as a boat, smoking stands, and "no parking" signs. For Christmas presents the beginning girls decorated hot-dish stands made by the boys in the wood shop.

The Teachers Association often calls upon the art department for tallies, score pads, and decorations. The pupils plan the designs which are submitted to a committee of teachers who select the one they prefer.

On St. Patrick's Day a dance and card party was given to earn money for the scholarship fund. Decorations, announcements, tallies, and score pads were made. The affair was a huge success, netting \$154 profit. For the same organization a leatherette card set was painted in oils by a vocational student, raffled off by the teachers, and a profit of \$26 realized.

The household offers the girls most of their opportunities for correlated work. Curtains, bedspreads, waste baskets, pillows, rugs, and pictures are designed, made, and used to brighten the dormitory rooms.

Layettes made in the sewing department included bibs quilted in designs made in the art room. A girl will often come into the art room to have a class suggest or criticize dress line or dress color harmony.

The cooking department and art department correlate in projects such as the presentation of teas, luncheons, and dinners. The cooking girls attend to the food preparation and the drawing girls to the table decorations, place cards, favors, and menu designs. Color schemes are carried throughout the decorations and food selection.

Posters were designed to illustrate mental hygiene at the request of the nurse, the wording suggested by her class and the illustration, lettering, and layout planned by an art student.

Almost all of the boys' art work is correlated with the print shop in completion of the Jersey School News.

Column headings, illustrations, cover designs, and page layouts are designed when the actual need arises.

Even outside community projects such as lectures, flower shows, or health shows often involve posters made by our children either for advertising or for competition. Last year two of the girls won prizes of \$5 and \$2.50 for posters exhibited in the flower show.

Many art instructors will object to this type of instruction due to the fact that they believe it impossible to adhere to or even partially cover the art curriculum. This is certainly an objection if your course of study calls for apples in water color during October, a turkey during November, a hatchet in February, and so forth, but if the course is a modern one covering techniques and art principles such as pencil outline, graduation, ink technique and the application of color harmony, line direction, interesting proportion, balance, and rhythm, the objection is overruled.

Any problem presented contains these principles and one or more techniques. Special stress may be laid on the art principle to be presented according to the course of study. The cooperative projects also open an unlimited field for drill through repetition, at the same time eliminating the drudgery from the child's point of view due to the fact that he can see a need for the finished product.

A child likes to help or feel he can be of assistance to someone. Many children have a natural aptitude for drawing and derive a great benefit and satisfaction by being able to have their skill recognized and used in more than one department.

These correlated problems are never planned for the coming year but originate as the need arises. The child often suggests a plan or problem which he especially desires, thus automatically observing the first law of learning—readiness.

The second law of learning—exercise—is followed by the actual design and application accompanied by the child's interest and a series of directions and methods taught only as the child finds a need for that particular phase; thus the child will learn methods and rules much more readily and rapidly than if presented as facts necessary to be known at some remote future date.

But the third law of learning—effect—profits most by the correlated method of teaching art. Any child must receive satisfaction in order to progress to the next step of endeavor, and this satisfaction is magnified 100 percent by each department concerned in the project.

Correlated art work, presenting the subject as it will be used in after life, capitalizing the child's immediate interest, applying the laws of learning amplified, and at the same time including all the art principles, seems to be one of the best methods of presenting drawing in accordance with the modern method of education.

ORAL SECTION

The oral section convened at 1:30 p.m., with Miss Josephine F. Quinn, of the Minnesota School, chairman.

Miss QUINN. The work of our section of the convention will begin with the reading of a paper prepared by Miss Buell.

WHY—AND WHY NOT?

By Miss EDITH M. BUELL, of the Lexington Avenue School, New York City

Apropos of nothing I am going to begin my paper with a story current several years ago.

A woman passing along the street saw a little boy and girl playing together. She stopped and in the course of conversation asked, "Is the little boy your brother?" "No", replied the little girl. "Why?", said the woman, "Haven't you the same father?" "Yes", said the little girl. "And haven't you the same mother?" "Yes; but he isn't my brother", said the little girl. What is the answer?

If you have never heard the story you are undoubtedly beginning to think of all sorts of complex relationships, so I will relieve the strain by telling you that the answer is, "The little girl was a liar."

Will the audience please forgive me if I relate a bit of personal history? As far back as I can remember I have always wanted to know the reason for things. As a child I was constantly questioning why this, why that, until my large family of brothers and sisters and my most patient of mothers and fathers, wearied by a long line of eager questioners, of whom I was the last, would answer my whys with, "To make little girls ask questions." Nothing daunted, I have kept right on until the present time, sometimes getting a satisfactory answer from others, sometimes searching out the truth for myself, and sometimes being forced to the conclusion that there is no answer that satisfies.

Since my greatest interest for the past 30 years has been my work for and with the deaf, my questioning has naturally been related to what is being done in our schools, and I am going to bring to this gathering some of the questions I have been asking myself and others, most of which seem to have only the one answer, "These children are deaf." It is true the children are deaf, but that answer satisfies me as little as the one given by my wearied family, "To make little girls ask questions."

Hearing children hear and comprehend spoken language far beyond their ability to use from the time they begin to understand anything. Their parents and friends do not couch all the language spoken in their presence in simple sentences composed of words of one syllable. They do not carefully refrain from using anything but the past tense for a period of time, then use nothing but the past and the future forms of the verb, and wait until the child is 5 or 6 years old before he is ever allowed to hear the present perfect used. Why, then, should so many of the teachers of the deaf use such care never to use a language form until they are ready for its formal presentation as a language principle? Why should not the same language be used to a deaf child that one would use to a little hearing child from the time he is born, or, since we have no control over home conditions, let us say from the time he enters school? Why not let him see natural language expression on the lips in conversation about his belongings, his activities, his interests, with such emphasis or illustration as will let him know what it is all about, and thus lay the foundation and pave the way for the child's use of language later?

The few totally deaf people with whom I have come in contact, who have been brought up in public or private schools with hearing children, without exception could not only express themselves in good English but the natural rhythm of their speech gave a fluency that covered its imperfections and made it perfectly intelligible. Surely their teachers and playmates did not confine themselves to certain language forms being taught.

The fact that deaf children, accustomed from the beginning to see natural language used, will comprehend and pick up new language from hearing people was amusingly illustrated not long ago by one of our pupils. He had been at home for 3 days and on his return was asked to write some home news. The first sentence was, "I had a heluvatime at home." He went on to say that his mother was ill; he had to do all of the housework, get the meals, and clean up the house. He didn't even have time to visit with a friend who called. When the teacher corrected the paper, she said, "Where did you get that word?" "I saw my brother say it. Isn't it right?" "Yes", replied the wise teacher, "it expresses what you wanted to say, but it is slang, and I wouldn't use it often if I were you."

Teachers of the deaf, as well as their hearing friends and relatives, deplore the stilted use of language so prevalent among the deaf. Why do they use such queer-sounding combinations of words? Shall we be satisfied with the answer, "They are deaf, and do not hear the language used by hearing people"? A truer answer to my mind would be, "They see stilted language expression on the lips of their teachers, and they are taught to express their thoughts in a queer, unnatural way."

Listen to these sentence, culled at random from school papers, which must therefore represent what is accepted as being good by those in charge of the language work:

"Some candy was passed to us by Katie."
"It was his first time to skate on ice when he went to the pond."
"I got into a street car approaching an electrically adorned house."
"We walked and saw three eats."
"He took the cat home and gave some food to it."
"We walked. We went to the movies."

Now, why in heaven's name, teach a child to say "we walked" in telling a bit of news! Why not teach him to say, "We went for a walk"? Or, if the children walked across the hall to see the movies, why not assume that they reached their destination in the ordinary manner? Unless they were transported in wheel chairs or some unusual way, why mention it at all?

Is there any person in this audience who, in writing of an experience, would express himself in any of the sentences just read? Then why deliberately teach deaf children to express themselves as no normal hearing person would? Deaf children are going to use the language they see and are taught. Why not teach them to express their thoughts simply, but naturally, in words a little hearing child might use?

One very definite conclusion has been reached as a result of the study and research work done by psychologists in recent years, viz, that the skills acquired in any supplementary training may not

function in a different situation. Recent experiments with hearing children in the so-called "transfer-of-training" show that even older pupils show serious limitations in the application of drill exercises. The tendency is more and more to teach children in such a manner that learning is an unconscious but necessary outcome of doing things.

Coming into the work for the deaf as I did after 6 years' experience in public-school work, I wondered why it was necessary to have so much formal drill work. Now I am satisfied that the answer is, "It isn't."

Speaking of drill work of various kinds, Prof. Arthur I. Gates, professor of education at Teachers College, Columbia University, says:

Although training by such extrinsic devices has attained great popularity in many fields of teaching, it secures slight justification from the established principles of learning. Analyses of the nature of improvement and studies of the transfer of training alike bear witness to the probable limitations of the supplementary device procedure. Learning consists in the building up of a complex reaction to a particular learning situation. During practice in writing ovals and loops, what a pupil learns is to make such figures under the conditions controlling the practice. Whether these skills will function in the course of actual writing is uncertain. In a similar way, what a pupil learns in phonetic drills is precisely to do whatever stunts are exercised under just the conditions which prevail during practice. There is always a probability that such skills, however well they may operate in the supplementary drill, may not function similarly in a different situation. It is a well-known fact that dependence on the transfer of subtle skills is risky even in the case of experienced and more mature pupils.

Why, in the light of this knowledge, should we continue to have little children write miles of verb conjugation in the vain hope that it will enable them automatically to select and use spontaneously the correct form when they wish to express themselves? Why have them spend hours of valuable time changing sentences in direct discourse to the indirect? Why have them use more hours learning rules and fitting words together in accord with a given rule?

If in the early grades in the public schools it is necessary to have a definite plan providing for activities and interesting experiences to stimulate the ideas of the children before any attempt at expression is made, why is it not even more necessary in our schools for the deaf? Why not provide such a wealth of interesting things to do all through our early years of vocabulary building and language teaching that the children will be eager to do them and talk about them? Why not habituate correct language usage by means of other similar situations to be talked about and written about?

To quote Dr. Frank E. Baker, president of State Teachers College, Milwaukee, Wis.:

We can make a classroom a drill hall or an inspiration. We can let it degenerate into a formalism that kills or we can breathe into it an inspiration that makes alive.

Why do the former? Why not do the latter? It is so much more fun for the teacher as well as the pupil.

Miss QUINN. I shall call upon Mrs. Smith, of the Colorado school, to lead the discussion on Miss Buell's paper.

Mrs. M. C. SMITH, of Colorado. I have not written a paper. I shall simply endeavor to review Miss Buell's paper and make a few

comments. I heartily agree with Miss Buell regarding the main ideas presented in her paper. I gathered from this article that Miss Buell is taking into consideration the difference between using language to the deaf and teaching language to this group of children. In the first part of her paper Miss Buell says: "Why should not the same language be used to a deaf child that one would use to a little hearing child?" I heartily agree with this theory. In speaking to our little children we should use the same language that we would use in speaking to a little hearing child. In other words, I would not try to simplify too much what I was saying to a deaf child. On the other hand, I would try to keep within a certain range so that he would at least grasp the idea from the language I was using. Miss Buell uses the expression, "using natural language to the child." She does not say teaching all these various and sundry forms. When it comes to teaching little deaf children all the forms of language which we would naturally use to them or which we should naturally use to them, it would be a very different proposition. There are certain expressions that are necessary and helpful to a first-year child and which can be taught as expressions without calling attention to the verb forms, and yet these expressions contain various tenses of the verb. For instance: "I don't know; do you know?" "I have finished; it is raining." You see how many tenses are represented here. Now, to me it would be folly to teach a child to say or to use to a child, "It rains", because that child is not ready to deal with the present progressive tense which, therefore, must be reserved for some other day period. Likewise it is wrong to teach "I finished", when the natural expression is, "I have finished." I think we can do much harm by teaching children wrong tenses simply because these forms may be easier. One of the reasons for "It rains" is that "ng" is difficult, and we procrastinate in requiring our children to use it. We decide to teach them to say "It rains" and change the form later. I believe this policy is altogether wrong.

Teach the child to say the natural thing. There are not so many of these expressions that come up in the first year that they cannot be taught as expressions. We simply teach expressions to enable the child to state what he wants to tell the teacher of certain conditions that exist, or to ask favors and so on in his relationship with the other children. But when it comes to teaching all those forms as such to beginners, I think anyone would agree with me that we would not go into that in the first year in school, and I believe Miss Buell doesn't mean to go that far either. She uses the expression "uses" and later on she says "teaches," but in reading over her paper I gather that she is not using "teaching" in its strict sense.

Miss QUINN. She does not mean written language.

Mrs. SMITH. I think not. Now, these expressions, as taken from the various papers: "Some candy was passed." We all want our children to write news items and we teach them to do it. The child who wrote "Some candy was passed" had been probably taught to write in the passive voice something along that line, and he was very proud of the fact that he could use the passive voice, and the teacher, rather than discourage that child, let it pass.

"It was his first time to skate on ice when he went to the pond." In this instance I think the class had been using adverbial clauses and the child possibly was doing his best to use one, with disastrous results. "We walked. We went to the movies." I think that sort of news was possibly allowed in a very young class, instead of saying to the child: "Your news is all right in itself, but people don't write it that way," and then making the correction. Of course, that is a very difficult thing to put over, I admit, but we can get around a lot of things. We don't want to hurt our children's feelings when they make mistakes like that, but we can say to them: "Yes, that is quite right, but we won't write it that way because people don't usually say that." I think there are a great many things that we pass by and let our children incorporate in their work that we could correct very easily and still not hurt their feelings.

Coming down to the subject of drill work, Miss Buell says that she has reached the conclusion that drill work is not necessary in the teaching of language. Personally I don't think anyone was ever taught through drill work. Yet we all have drill work to fix the principle or principles. If a teacher knows what she is going to attempt to teach during the year, and introduces these language constructions informally at every opportunity during the year and creates circumstances for using such instructions in order to use them to the children more often than natural circumstances might permit, then when she comes to present them to the children in formal work—as an exercise—she has a background to work on. I don't mean to say that drills are not necessary. They are, to find out where the child stands; but I don't believe they ever taught our children much, if anything. I am a great believer in informal teaching; not leaving it at informal teaching, dropping it there, but in introducing all language forms in the way I have suggested and using them over and over again before we begin calling the children's attention to the form.

As for verb conjugation, I feel very much the same way. Unless verb conjugation is immediately incorporated in a sentence or sentences, it is of little value. If we have to conjugate—and we probably do have to go through this procedure—we should immediately create a situation that brings about the use of that conjugation. If we do this, we have accomplished something. But if we conjugate just for conjugation's sake, I doubt that we are getting very far. As for making the classroom a place for a certain formality that has to be gone through with, I think Miss Buell is absolutely right that much is due to the teacher herself in creating an atmosphere that makes her children want to do things. Now we all have to resort to certain measures at times in order to create that atmosphere.

Every day is not an inspiration to the teacher, nor to the child, but we can do our utmost to make it such, and I think that if we bear in mind that from small acorns oaks may grow, and we hope will grow, and use to the child the natural form of language, the form that we want him to understand and that we hope he will give back to us, we have gone far in giving him the correct language idea, if we have not gone all the way. We have gone far enough to give him the

idea that there are many ways of expressing the same idea. Of course, many corrections have to be made; everything is not going to be made rosy by the use of this informal presentation method. Corrections will always have to be made whatever the method of presentation but we can make our task much less difficult by using the correct form or forms of language to the deaf child and by requiring him to use the proper construction at the time it is needed rather than give him an incorrect form because it seems easier, and expect to "unteach" this form later and substitute the correct form.

Miss QUINN. I should like to differ a little from Miss Buell in her idea of drill. I think you have to have drills in some things. For instance, in the use of prepositions, if I put a book under the desk and then tell the children that I have put that book under the desk, and they are not to use that "under" for a long time until I want to tell them a story about someone putting a pencil under a radiator, I don't think the children would remember "under." I have to make that plain by putting the book under the table, a box under the bench, and so on, until they know that "under" perfectly. Then I may go on to putting things behind things, throwing things over things, and so on with each preposition. I think you must drill so that when you come upon these prepositions later they know immediately what they mean, and you do not have to stop and go all over them again. I really think drill on those things is almost absolutely necessary.

Mrs. SMITH. Perhaps I did not make myself clear. I don't believe that any idea of a picture in a child's mind is ever taught in drill. I think we can go through those formalities without being sure that the child is understanding. I don't think that is where our actual teaching is done.

Miss QUINN. No. It is just fixing it, but that fixing is absolutely necessary.

Dr. PITTINGER. I agree heartily with Miss Buell's paper. I was interested in the questions Miss Buell has raised. I came into this work a dozen years ago and, rushing in without any preparation for it, I came under a good deal of criticism, probably justly so. I had no better judgment than to ask some questions and make a few suggestions which I found were very unpopular, but I am delighted today to see that Miss Buell is asking those same questions and answering them much to my satisfaction.

I felt that this work had the most wonderful opportunities of any teaching I had ever seen. I felt that there was a maximum of result to be obtained with a minimum of thought, but that in much of the teaching it was formal in the extreme. So, I raised this same question why language could not be used more naturally with these little children. It seemed as though there was a certain way of proceeding and that way must be followed and observed. I asked our primary teachers why these children should not have a reading vocabulary that is in excess of their spoken vocabulary. I was met with the statement that it would ruin their speech, or something to that effect. Now the movement toward a child's reading is altogether in that direction. Children are not required to lip-read all this vocabulary they are getting, and I think that is a most encouraging thing in our work.

Now, I believe that drill is necessary, but when it drops into formal, dead drill, it is almost useless. I remember going into a school-room where the children were studying the multiplication table. They had on the floor some squares chalked and in those squares were the numbers 1, 2, 3, 4, 5, 6, 7, 8, 9. One child was put at the board with some chalk and the class was divided into two parts and they were having a game. Back at the base one child had a bean bag and he threw it down on the floor on the number 2 and he said 12. They were studying the table of 6. His side got the square 12. I said: "Why didn't you throw it on a big number?" He said he didn't know the answer. If he had thrown it on a big number and somebody else beat him to the answer, the other side got the count instead. Now, there was a motive, a real purpose, in learning the multiplication table there. We cannot reduce all of our drills to that definite motive, but the more nearly we can, the more sure are our children of learning with a definite purpose.

Now, in regard to verbs, I am not sure that we ought to teach nearly as much formal grammar as we do. I doubt it. I understand that the old Greeks, who used the most beautiful language of all, had no grammar at all. I think we waste a lot of time—we do in our school, I am sure. Of course, all our people don't agree with me, and I don't try to force my opinions on them, but I think we waste a great deal of time. It is a little like the boy who was kept in to write the rule for forming the perfect tenses. He had written it 50 times and when he had finished, his teacher was out of the room. He was somewhat discouraged, anyway, so he wrote at the bottom of the paper, "I have went home", violating the rule which he had written 50 times. Much of our formal teaching leads to just about such results. I see it in many ways. I know that we are still guilty of teaching local geography, geography of the school yard—one building is north of another, still another building south of that, and so on. We have an idea that if we can just get that established perfectly, then they can understand a little larger view, can go out to College Avenue and so branch further out, when in truth they want to follow Lindbergh all over the world. They want bigger geography.

I think we can get north, south, east, and west and the rest of it much easier and much quicker and with a great deal more pleasure if we take them into the things that are going on about us in a great way. I think we have been obsessed with the idea of thoroughness, to the detriment of thought and learning. I believe in freer, saner, more natural and normal use of language, even with little children. We discount their intelligence and we reduce our work to formal drill. They are starving for the bread of life and we hardly give them crumbs.

Miss WARD. I approve of almost everything that Miss Buell had to say, but when it comes to the question of drill I have to confess that I have been guilty for a good many years of teaching those expressions she took from the papers and I think that our deaf children would never write them unless they had been taught to them. I am afraid that if I had to teach right now, it would be a little difficult for me to live up to my ideas. Sometimes I have been sure that I could actually do some of the things that I feel I should

do and would like to do, and wish I had the opportunity of teaching.

I think that Miss Buell, in speaking of drill, means that when we give a child spoken language we must return to that frequently until it is established and the child has made it his own. Of course, you don't have to use it in the same way. Recently, I was visiting a young teacher and she was trying to get from a child a certain thing. The child did not know it and she was going to make him think of it, and he could not. I said, "When did you have that?" I think she said they had used it once or twice, and probably not more than once or twice, and that was 3 or 4 weeks previous. Of course, the child did not know it.

You can call it drill, but I think in all our language work we have to create a situation and return to the thing until the child has mastered it. I don't think Miss Buell means that you must teach haphazardly. You must have your work in mind and establish what can be done and I think our young teachers ought to realize that in teaching language we have to return to the thing until it is thoroughly established.

Miss QUINN. We now turn to a consideration of reading with a paper by Miss Ford, of the Ontario school.

PRIMARY READING

By Miss CATHERINE FORD, of the Ontario School, Belleville, Ontario

So much has been written within the past 3 or 4 years on the subject of reading that it would seem as if there were nothing left to be said, and I hesitate to present this paper to a gathering of teachers who are, no doubt, better informed on the subject than I. Since I have yet to listen to a paper given at a convention without receiving valuable hints and new viewpoints, I therefore present this paper with the hope that in spite of all that has been said and all that has been written, there may be something of help to some teacher who is struggling with this all-important subject, even as I, and that it is an all-important subject I am sure you will all agree.

To quote from the opening chapter of Dr. Arthur I. Gates' book, *The Improvement of Reading*:

Reading is both the most important and the most troublesome subject in the elementary school curriculum. It is most important since it is a tool, mastery of which is essential to the learning of nearly every other school subject.

The importance of reading is indicated in many ways. That teachers and school officers recognize its significance is indicated by the relatively large time allotment and the wealth of teaching devices originated for this subject in the elementary school. That those engaged in research realize the importance of reading is apparent in the relatively large number of investigations in this subject that have been made during the last three decades. Both school experience and scientific research have added new evidence of the prime importance of good reading in school work. That spelling is partly dependent upon effective reading, that good methods of study in geography, history, and other subjects are largely due to types of reading techniques, that difficulties in working arithmetic problems frequently result from faulty reading habits—these facts are examples of an increasing number of findings that emphasize the value of good reading habits.

Perhaps no group of teachers is more aware of the truth of the foregoing statements than the one engaged in teaching the deaf. To establish good reading habits in deaf children is to lay the corner-

stone of the structure of social adjustment we hope to rear. We know what deaf children need but how to meet the need is the problem facing us, and I think probably the most important phase of the problem is how to form these desirable habits of reading at the earliest moment possible. That they can be formed earlier than we used to think possible has been amply proven. It behooves us therefore to reconstruct our courses of study so as to allow for reading as a part of a program of daily activities, beginning with the children's first day at school.

I had a most intensely interesting and valuable experience last summer with a deaf child 3½ years old, whose ability to read was astonishing. His mother, who had been a kindergarten teacher, began his education when he was 2 years old. Possibly few children have had the advantage of such concentrated attention. The mother told me that she put forth an almost frenzied effort having the feeling that there was need of desperate haste in order that Jimmy's mental development would not be retarded on account of his handicap of deafness. What that mother accomplished was a revelation to me and I feel that what we teachers of the deaf need is a little of the frenzied effort of that mother. We should feel just that same desperate need of making the most of every minute of the early years.

To come back to Jimmy: His concentration was amazing. He would sit on my lap for an hour looking at a book, turning it over, page by page, insisting on being told the name of everything pictured on a page and pointing out all the words he knew. He would sit by himself looking at a book, poring over it in fact. I never saw him turn over the pages hurriedly, mar, or destroy a book during the time I was with him.

As he walked along the street, he insisted on being introduced to anyone we met whom he had not seen before. If he saw anything new, he at once wanted the name. I realized then as never before how important those early years are, and felt that we had been going along much too leisurely, and feeling much too satisfied with what we were accomplishing.

I was deeply grateful for the opportunity of learning from that child's mother and I can assure you I felt very humble and could well understand the attitude of the mothers of some of our children whom we are inclined to criticize because we think they expect too much from a child's first year at school. We need to have parents exacting. It is very good for us, for after all the children are theirs, not ours, and they have a right to expect much from us. We, as teachers, are prone to be a little too satisfied with ourselves, at least that is what I feel about myself, but every time I get feeling that way something happens that, figuratively speaking, rubs my nose in the dirt. I arise, thankful for the chastening experience and ready to tackle work with renewed energy.

After seeing the demonstration of silent reading by pupils of the Lexington Avenue School for the Deaf, New York City, given before the convention of progressive oral advocates in that city in 1927, and later reading Dr. Thompson's book, *An Experimental Study of the Beginning Reading of Deaf Mutes*, I wrote Dr. Gates and obtained a set of the material used for this experiment.

In going over the material carefully I could see the enormous value of these exercises designed to develop gradually all types of word mastery and perception, and all varieties of comprehension. No doubt you are all familiar with this silent reading material so that there is no need of further description.

The content of the material made me realize that I was colossally ignorant of the new methods of teaching reading and I at once procured Dr. Gates' book, the Improvement of Reading, and a little later the companion book, New Methods in Primary Reading.

The first book—

As stated by the author in the preface—

presents a detailed account of a system of measuring achievement, diagnosing difficulties, and conducting instruction in reading. The plan of diagnosis and all but one of the tests have been developed by the author during more than 8 years of research. Probably the most important contribution of the volume is the demonstration of the utility of a new method of teaching reading. The value of this system has been evident not only in experimental studies of normal children but also when it has been subjected to the most rigid tests by using it as a means of teaching pupils who, because of deafness, dullness, instability, or other types of native and acquired limitations, have been unable to learn to read or have learned but little by other methods.

The second book, named "New Methods in Primary Reading", is, to quote from the author—

related to the earlier one as preventive medicine or hygiene is related to the diagnosis and treatment of the disease. The earlier volume dealt entirely with the diagnosis and remedying of reading difficulties. The present book deals exclusively with prevention of such difficulties.

Just recently I obtained Dr. Gates' third book, Interest and Ability in Reading. The author says of this book:

The task of the volume is to show the influence of a number of factors upon both interest and ability.

If the most of my paper is made up of quotations from these books I can conceive of nothing more valuable to teachers and would recommend all three to teachers interested in the subject of reading.

Chapter 5 of the new book, Interest and Ability in Reading, deals with the organization of reading materials.

Some of the main facts which must be taken into account in attempting to develop a course in reading are as follows:

(1) The course should provide materials in which the vocabulary burden is light enough to enable the pupils to master the recognition of new words adequately. In the primary grades there should be 30 to 40 running words for each new word introduced.

(2) The course should develop the reading vocabulary by means of abundant reading of senseful material instead of by means of phonetic drills and other types of isolated word study.

(3) The course should provide an abundance of reading material in which the pupil is unhampered by difficulties in word recognition so that the various habits, essential to fluent, accurate, full, and enjoyable comprehension may be developed.

(4) The course should contain an abundance of materials of the type, or containing the elements, found to make a strong appeal to pupils' interests.

(5) The course should not be restricted to mere story reading or to any other one type, however interesting, but should include a variety of reading materials. It should include different types of narrative and informative selections, and exercises which enable children to do things with the ideas obtained from reading.

(6) The course should make provision for using each type of material in the way in which it proves to be most useful and interesting.

(7) The course should not treat reading as an activity to be isolated from other enterprises, but should make it a significant and helpful part of a comprehensive program of activities.

(8) The course should not consist of a mere aggregation of disconnected activities, but it should be as Dewey says, "a serial or consecutive course of doings, held together within the unity of progressively growing occupation or project."

We have been given above the essentials of a course in reading; the question is now: What are we going to do with them? If we are to get any help from them, they must be elaborated and illustrated.

To quote again:

The first lessons are important because they may be influential in initiating habits of comprehension and perception, and attitudes of like or dislike for the work.

Let us elaborate on the first essentials—

The course should provide materials in which the vocabulary burden is light enough to enable the pupils to master the recognition of new words adequately. In the primary grades there should be 30 to 40 running words for each new word introduced.

That means that too many new words must not be introduced at once, and that each word must have a certain number of repetitions in order that it be recognized easily. Therefore, we must construct or provide enough reading material to give the amount of repetition necessary. We know from experience what interests children—color, number, action, animals, toys, etc. It is just as easy for a deaf child to learn the names of the colors as it is for him to match colors, as we have him do with various kinds of attractive sets of the sense training materials. The use of a printing set of good large clear type is a great aid in preparing material. It will not be necessary for me to describe the nature of this home-made material as so much has been written in the school journals along this line.

Other attractive material to be used at this stage is My Work Book in Reading BK1, by Aldredge and McKee, which may be procured from the Harter Publishing Co.; Problems in Color and Number, another Harter publication; The Harter Silent Reading series, and exercises such as given in the Gates Silent Reading Material. In fact, there is so much attractive material one hardly knows what to choose.

My Work Book in Reading can be used almost from the first day at school and appeals strongly to the children. Repetition in such an attractive way that the children are not aware that it is repetition, is thus obtained.

The second essential.—The course should develop the reading vocabulary by means of abundant reading of senseful material, instead of phonetic drills and other types of isolated word study.

I like that word "senseful" material; that appeals to the senses of the child, informative work, and play material which often takes the form of direction. Again the Gates Silent Reading material; Read and Do, published by Hall, McCreary & Co.; A Reading Work for Beginners, published by J. M. Dent & Sons; My Work Book in Arithmetic, a Harter publication; Problems in Silent Reading, another Harter publication; Work and Play with Words, Hall-McCreary & Co., and other books too numerous to mention.

The third essential.—The course should provide an abundance of reading material in which the pupil is unhampered by difficulties in word recognition, so that the various habits essential to fluent, accurate, full, and enjoyable comprehension may be developed.

Reading within the ability of the child, keeping in mind that interest is the result of and depends upon achievement, and not the cause of achievement as so many teachers are apt to think. The teacher must know the individual attainments of the children and must take into consideration such things as eye habits, memory span, associative learning, etc.

The fourth essential.—The course should contain an abundance of materials of the type or containing the elements found to make a strong appeal to the pupils' interests.

What does appeal to children's interests? To quote again from Dr. Gates' book:

- (1) Surprise: Unexpectedness, unforeseen events, happenings, conclusions, and outcomes.
- (2) Liveliness: Action, movement, having something doing.
- (3) Animality: Presentations of things animals do, of acts about them, and their characteristics and experiences.
- (4) Conversation: Talk.
- (5) Humor: From the child's point of view.
- (6) Plot.
- (7) Suitability.
- (8) Difficulty.

I think the work books used with the Gates-Huber Work-Play Books and the Work-Play Books themselves will supply material to stimulate these interests.

The fifth essential.—The course should not be restricted to mere story reading or to any other one type, however interesting, but should include a variety of reading materials. It should include different types of narratives and informative selections and exercises which enable children to do things with the ideas obtained from reading.

Most of the silent reading books on the market include this necessary variety of reading material. Lists of these books have been given from time to time in the school journals. I might add to these lists a set of books just recently published and procurable from the Bureau of Publications, Teachers College, Columbia University. These books are the Gates-Pearson Practice Exercises in Reading. There are four types of exercises included: Type A, reading to appreciate the general significance of a selection; type B, reading to predict outcome of given events; type C, reading to understand precise directions; and type D, reading to note details.

The sixth essential.—The course should make provision for using each type of material in the way in which it proves to be most useful and interesting.

This needs no elaboration.

The seventh essential.—The course should not treat reading as an activity to be isolated from other enterprises but should make it a significant and helpful part of a comprehensive program of activities.

What types of activities are interesting and profitable to children?
(To quote again:)

- (1) Linguistic activities: Discussions, debates, relating experiences, telling stories, etc.
- (2) Dramatic activities: Laughing, shouting, imitating sounds of animals or things, gesticulating, facial grimaces, and acting out a part.
- (3) Artistic activities: Selecting, arranging, completing, coloring, or drawing illustrations, modeling or decorating objects.
- (4) Constructive activities: Posters, news sheets, dolls' furniture, etc.
- (5) Exploratory activities: Searching and investigating for data relating to a topic, finding things in other books, getting information from others, etc.

Surely no teacher could possibly have any difficulty in finding materials to encourage these activities in children.

The eighth essential.—The course should not consist of a mere aggregation of disconnected activities, but it should be as Dewey says, "A serial or consecutive course of doings, held together within the unity of a progressively growing occupation or project."

We have a serial or consecutive course of doings in the Gates-Huber Work-Play Books and also in a set of books called "Our Book World", published by Longmans Green & Co.

With such admirable guidance as Dr. Gates gives us in the planning of our reading course, and the wealth of material at our disposal, should we not be able to establish good reading habits in our deaf children?

Miss QUINN. There seems to be a general impression among the teachers of beginning classes, that speech work as a whole and as a vital force takes a decided slump after the pupils pass into higher grades. This may or may not be true, but if it is it is important that the reason be found out and some remedy suggested.

Mr. Blattner of Oklahoma says, "We are substantially agreed that our profoundest educational problem, the one that must take precedence over all others in curricula of schools for the deaf, is a proper grounding of our pupils in the command of English." I feel sure there is practically no difference of opinion on that point, but in the acquiring of that language much can be profitably done through speech.

Teachers of primary classes devote by far the greater part of their time to speech and speech reading, speech correction, etc.; yet the progress in language is in no way retarded. Why, then, is it not possible for the same procedure to be carried on through each succeeding grade.

To be sure, the results in the first grades are often not all that could be desired, but through exhaustless energy and patience on the part of the teacher, the child has accomplished much and if the same effort and optimism were practised by each succeeding teacher there seems no reason why there should not be, if not excellence, at least improvement. By this I do not mean the mentally unfit. As often happens, a child has mental capacity for 1, 2, or even 3 years' work, coming through at the end of the list each time until he must finally be placed in a slower class or lower grade.

In speaking of speech deterioration, I mean the bright pupils, some of whom did excellent work and most of whom gave average promise at the beginning. We are all familiar, I am sure, with the salutation, "Good Maw", and the response of "Tha' you", to our

proffered favors. Frequently visitors will remark, "If they can do this well the first year, they must be able to speak almost normally when they finish school." Truthfully and regretfully we are obliged to say that such is not the case. Often I think if a pupil's speech is poor it is taken for granted that it must remain so. If the previous teacher has been able to accomplish no more than the evident jargon, why try further? Again I am speaking of the average, not of the occasional pupil who through some malformation or some inherent inability obviously will never speak intelligibly but who is still able to read lips and make satisfactory progress and so remains in the class.

If teachers would only bear in mind that even though ability to speak and to read the lips may be very meager, nevertheless a great deal has already been accomplished and by keeping everlastingly at it each one will be able to add her bit. Even though there is a special teacher of speech for the higher grades (which in many schools there is not), much more depends on the classroom teacher and the vigilance with which she watches for mistakes and corrects them, as well as the utilization of every opportunity to speak to the pupils and to have them speak to her.

Miss EUNICE HOPPER, of Illinois. Teachers of the intermediate grades have been accused of neglecting speech and speech reading. In the primary department a large portion of the school time is spent in formal teaching of speech and speech reading. The teachers in this department feel that it is not right that the intermediate grades should let this slip after so much time has been spent in an effort to produce good speech and good speech readers.

It is true that the program of the intermediate teacher is very full and a great amount of subject matter has to be covered, but it does not necessarily follow that speech and speech reading need be neglected. There are many interesting ways in which they can be continued and improved.

Formal speech and speech reading need not be given such a large place in the program, but there are unlimited resources for using both very advantageously in connection with such subjects as language, history, and geography.

The teaching of language principles affords many opportunities for improving the speech and speech reading of the pupils.

In developing a new story, try to get the children in the right atmosphere by conversation. This brings in many new words, thus increasing the vocabulary, and creates greater interest in story work.

The exercises which have been most helpful to me in fixing language principles are those which I used in connection with comparison, the tenses, and direct and indirect discourse.

Comparison of adjectives can become very dry and uninteresting, but if it is given in oral lessons and the pupils are allowed to make their own comparisons it becomes much more interesting and forceful.

In beginning the work use objects such as pencils, books, balls, marbles, apples, etc. Ask "Which is longer, the red pencil or the blue pencil?" There are many objects in the schoolroom that can be compared which bring out a variety of adjectives. Next ask a

pupil to compare objects, as: "Compare the blue ball with the white ball." When the idea and language of comparison is well fixed, let the pupils compare persons. They never tire of comparing each other—their age, their height, their eyes and clothing. This kind of exercise is of more vital interest to the children than any number of written exercises would be.

I think the exercise that helped me the most and which called for more original thinking on the part of the pupils was the one used in teaching direct and indirect discourse.

For the first step give commands such as, "John, open the window." (John opens the window.) Follow this with, "What did I say to John?" It is well to write the sentence on the slate so that you are sure that each child gets it correctly and also to show how to use the quotation marks. After the idea of the direct quotation is fixed, begin the indirect as, "What did I tell John to do?" Soon the children sense the difference between the direct and indirect.

After the command with "not" has been learned, then give the polite command, as, "John, please brush the slate." Now, the children can give each other polite commands and they like to do it. After the polite command is given, the teacher may say, "What did Ben say to John?" Then, "What did Ben ask John to do?" "Told", "that", "asked", "if asked", "how", "when", "where", "why", and so forth, are developed in the same way.

So that the poor speech readers do not miss anything, I usually ask someone to write the conversation on the slate. In this way every one is able to learn and understand the different forms.

The language in an exercise of this kind is spontaneous and varied. The language principles are fixed in an interesting way and at the same time there is practice in speech and speech reading for the pupils must read the lips of not only their teacher but also of each other.

Miss QUINN. We close now with a brief paper by Miss Mitchell.

ACCENT AND THE SHORT VOWELS

By Miss DOROTHY B. MITCHELL, of the South Dakota School, Sioux Falls, S.Dak.

It is difficult, in dealing with any phase of speech development, to feel that there is a likelihood of one's being able to add very much to that which has already been said upon this very important subject. However, it has seemed to me that the subject of accent has received much less attention than it deserves, especially in beginning classes and first and second grades.

No doubt others have observed that in the accented syllable of a word it is the vowel alone that is capable of being accented, although, of course, a little more than the usual amount of stress falls on the consonant or consonants preceding this accented vowel. Accent in the deaf child's speech, then, merely amounts to stressing and slightly prolonging the vowel in the accented syllable. It could and should be taught from the very beginning, since no English word of more than one syllable is unaccented.

Also, the ability to bring out clearly, and to slightly prolong, the vowel in the accented syllable has another advantage. For to go

somewhat further, it seems to me that no word, even one of a single syllable, is without accent. That accent or stress is on the vowel. This can easily be noticed in pronouncing distinctly such words as: "Ruth", "grew", "glass", and "leg." In my experience, nothing so clarifies the deaf child's speech as the insistence that he stress or, in other words, bring out clearly, the vowel, thus subordinating, though by no means slighting, the consonants. Such speech difficulties as so frequently occur in such words as "green", "gloves", "glass", "bright", and so forth, which all too often become "grreen", "gllass", "gllloves", and "brright", are lessened, as the fault lies in the tendency of the child to stress the double consonant instead of the vowel.

Now, let us consider what becomes of the short vowel in accent. Very frequently, there is a short vowel in the accented syllable. This vowel must be not only stressed, but prolonged. Hence the deaf child must have the ability to prolong all of the short vowels if he is properly to pronounce words in which they occur in the accented syllable. Instances of this are found in the words, "eleven" and "begin." (I find also that children who are taught to prolong the short vowels are able to get a more definite understanding of their positions than they formerly had.) Also, when bringing out the short vowel sounds clearly in words of one syllable, one begins to wonder whether the short vowels are so very short after all. Surely slightly prolonging the short "e" sound in the words "egg", "met", "head", and "red" makes them much more intelligible. Also the short "i" sound in "hit", "him", "ring", and "string." In fact, the same is true of all the short vowels. However, these same short vowels become genuinely short when they occur in the unaccented syllables of words of two or more syllables.

This slight prolonging of the short vowels might be objected to on the score of its slowing up the deaf child's speech, but I have not found this to be the case. Instead it seems to make for smoothness, continuity, and greater intelligibility.

Dr. MEYER, of Missouri. Why call them short vowels? They are different vowels. "It" is not the same as "eat"; it is a different vowel altogether. It is all a mistake, phonetically wrong. The so-called "short vowels" are not short. Why call them short vowels?

(The convention adjourned to Thursday, June 25, at 10 a.m.)

FOURTH DAY, THURSDAY, JUNE 25, 1931

PROGRAM

8 to 10 a.m.:

Exhibits, demonstrations, and outlines. Same as for Tuesday's program with one exception; demonstration on silent reading, Mrs. M. C. Smith, of the Colorado school.

10 a.m.:

General session, Dr. Percival Hall, Gallaudet College, chairman. Paper, Language Work for Advanced Grades, Miss Enfield Joiner, North Carolina school; discussion, Mrs. Ida D. Elliott, Colorado school; paper, Use of Psychological Tests with Deaf Children, Supt. E. R. Abernathy, Ohio school; discussion, Supt. R. F. Nilson, Arizona school.

11 a.m.:

Address, Can Education Save Democracy, Dr. H. W. Wright, University of Manitoba; paper, Visual Education, Mr. Marshall S. Hester, Iowa school.

2 p.m.:

Normal section, Mr. D. T. Cloud, managing officer, Illinois school, chairman. Discussion, Training-in-Service for Our Deaf Teachers, led by Mrs. B. M. Riggs, superintendent, Arkansas school, and Mr. T. L. Anderson, Iowa school; discussion, Better Trained Industrial Teachers, led by Mr. D. T. Cloud, managing officer, Illinois school, and Supt. Victor O. Skyberg, Minnesota school.

2 p.m.:

Kindergarten section, Mrs. Margaret C. Smith, Colorado school, chairman. Paper, Informal Speech Reading in the First-year Class, Miss Sarah E. Lewis, South Dakota school; paper, The Vocabulary of a First-year Class, Mrs. Anna C. Hurd, principal, Rhode Island school.

2 p.m.:

Auricular section, Mr. Leonard M. Elstad, principal, Wright Oral School, chairman. Paper, Using Neglected Hearing Remnants in Speech Teaching, Mr. John D. Wright, founder, Wright Oral School; paper, Acoustic Education of the Deaf, Miss Marie K. Mason, Phonetics Laboratory, Ohio State University; discussion, Supt. A. C. Manning, Western Pennsylvania school; motion pictures of work of the Phonetics Laboratory, Ohio State University, Miss Marie K. Mason.

6 p.m.:

Gallaudet College Alumni reunion.

7:15 p.m.:

Meeting, conference of executives of American Schools for the Deaf.

8 p.m.:

Dance and social hour.

MORNING SESSION

The convention was called to order in general session, at 10 a.m., with Dr. Percival Hall, of Gallaudet College, chairman.

Dr. HALL. We shall now proceed with our regular program, which begins with a paper by Miss Joiner.

LANGUAGE WORK FOR ADVANCED GRADES

By MISS ENFIELD JOINER, North Carolina School, Morganton, N.C.

When the chairman of the program committee of this convention asked me to prepare a paper on language work for advanced classes, I told him that in my experience as a grade teacher I had never had an advanced class, and that in my experiences as a supervising principal I had come in close contact with the higher work of one school only, the school with which I am at present connected. I explained that any paper that I might write on that branch of our work would be largely reportorial in its nature, and that in the main I would be expounding the ideas of the teachers of the advanced department of the North Carolina School. I am particularly indebted to the two teachers who handle the language work and cognate subjects in our two highest classes, Misses Annie McD. Ervin and Helen T. Moore.

I should like first of all briefly to comment on the language work of the grades leading up to the advanced department and then to speak of the organization of the department. Our course of study covers 12 years' work. We have found through years of experimentation that pupils of average mentality, entering at 7 or thereabouts, can do the work prescribed year by year. Beginning with the second grade or third year in school all our language drill work is based on that admirable and, we hold, indispensable series of textbooks, *Language Stories and Drills*, books I, II, III, and IV, by Croker, Jones, and Pratt. The completion of book IV in our seventh grade or eighth year in school marks the beginning of our advanced work. During the 6 years these textbooks are in the hands of our classes, the work is supplemented with various original exercises and devices.

The organization of our advanced department differs from that of the rest of the school in that, to a modified degree, we follow the departmental plan. The work of the department covers 4 years, eighth grade, ninth grade, junior and senior classes. Each teacher has one class for 3 of the 5 hours of the school day. She is responsible for the language drill, part of the original language work, the speech, the speech reading and one other subject of that particular class. The remaining 2 hours each teacher has her own specialty, taking in turn classes sent to her. Each class, therefore, comes in contact with three teachers, and we believe this plan for older pupils has many advantages over the plan of having each teacher keep a class for the full 5 hours. It not only affords more practice in reading the lips of various speakers, but it broadens and extends "the language atmosphere." And above all things else we would, to quote an apt characterization Dr. Yale once made, "saturate" our pupils in English.

In our advanced department, as in our lower grades, the time given to this major subject is divided between "original language" and "language drill." In our nomenclature "original language" may be defined as all efforts on the pupil's part at independent and individual expression; "language drill", as all formal presentation of new language forms and all drill on those already presented. We include as part of our language drill work the 2 years' study of English grammar. Grammar we regard as a tool which may be useful in the hands of an expert workman. We hold, though, that a memorized knowledge of all the grammars in English isn't worth a pica-yune to a deaf pupil unless his assimilation of classifications and definitions may provide him a standard by which to weigh and measure his own use of English. In short, the ability of the pupil to use English determines the worth of all language drill; the unconscious application of its principles is the sole test of its value.

In the first 2 years of our advanced work we use selected lessons from Longman's English Lessons and Longman's Briefer Grammar. The definiteness and conciseness of the Longman series make them, in our opinion, particularly suitable for the use of the deaf. In the eighth grade much supplementary drill work is given on connectives, both subordinate and coordinate, on the perfect tenses of both voices, and on the progressive forms of all tenses. The verb

is the backbone of any language, and the tenses are the vertebra of the verb. When the verb has been mastered one can count on intelligible English. In this grade, also, we begin to train the pupil to seek variety in expression by much work in using synonyms and antonyms for verbs, adjectives, nouns, and adverbs. Adjectives are classified as to their use in describing persons and their various characteristics—physical, mental, and spiritual—and in describing places and things. A formal introduction to grammar, anticipated as far back as the preparatory class if one uses any of the several language analysis methods devised for teaching the deaf, is begun by requiring formal definitions of the parts of speech and forms of sentences.

In the first term of our ninth-grade drill is concentrated on clauses of all types. This involves further drill on the perfect and progressive tenses. Variety in expression is sought through much work in changing adjectival clauses to adjectival, prepositional, and participial phrases and vice versa. "A man who had on a brown overcoat" becomes "a man in a brown overcoat" or "a man wearing a brown overcoat." In the second term the formal drill centers on the uses of nonmodal verbs, and the uses and meanings of the moods, with the subjunctive mood handled sparingly.

In teaching the use and meaning of all language principles or forms in all grades, in our formal work we use four principal methods—

1. Action work—having the pupil do something and then tell what he has done.
2. Statement of obvious fact—as in the case of the inverted subject, "There is a book on the floor."
3. By question and answer—obtaining in the long answer the desired language form or expression.
4. By the use of conventional drills, such as putting two sentences into one, filling blanks in elliptical sentences, devices for conjugating, incorporation of words, and expressions in sentences, and so forth.

Some principles are best presented and drilled by one or more of these suggested methods; some by another. But there is a more potent method of teaching English than any of these, and that is the informal method of using the principle to be taught. This may become a formal method if the teacher deliberately makes up her mind to use it, and even in our formal classroom work none of us use it as much or as constantly as we should. In the hands of a teacher whose whole consciousness is submerged in her language work this method is a powerful instrument. You will pardon me if I pause here long enough to tell about an experiment we have been trying for 2 years in our primary building. Each morning when the small boys and girls meet in their playrooms to line up to go to breakfast, they find on large slates on the wall an item of news, written in natural, idiomatic language. The item is not a conventional one and is chosen because the fact may best be expressed in the sort of language one so often doesn't think to teach! All new words are divided and phonetically marked. The first thing the children do when they enter the schoolrooms is to tell the teacher "the news." The result has been that children in their second and

third years in schools, and even the more advanced pupils in their first year are using in their own original work many of these principles and expressions, "because" clauses, short relative clauses, adjectival phrases, nouns in apposition, idioms, and natural expressions. So much may a "line-a-day" accomplish.

In our intermediate, and even in our advanced, grades this method is the only one whereby certain principles may be effectively given. In my opinion, the present perfect tense and all tenses of the subjunctive mode should be taught only by this method. Idioms can be taught only in this way. Miss Ervin in her advanced classes is strongly opposed to formal work of any type with idioms. Idioms should be classed as among the imponderables; they have to be accepted and used, and it is futile to try to explain them. One can no more "gulp in" idioms than one can "gulp in" air.

In the junior and senior classes the work of the 2 preceding years is reviewed and amplified. An examination of our printed outline of work will show that among the requirements for language drill work for the 3 last years in school is what may appear to be a rather insignificant item, "Drill on weak points as revealed by mistakes in original language." In reality, it is one of the most important phases of our language drill work. Miss Ervin and our other teachers keep notebooks, and as they correct work on slates or on paper they jot down the more common mistakes and make them the bases for special drill. If a class reveals weakness, for instance, in the use of the passive voice, all other drill is abandoned for the time being, and the drill is concentrated on the meaning and uses of the two voices. Miss Moore reports that one of the most troublesome of all mistakes is in the confusion of the definite and indefinite articles. I have long thought that perhaps as far back as the preparatory year we must misuse those abominable a's and an's and the's, and are thus responsible for the mistakes which persist through the grades.

In a paper such as this it is impossible to give more than a bare outline of objectives, but, before beginning a discussion of original language or composition, I should like to say that a teacher of the advanced grades must know how English is built, must develop, if she does not possess it, resourcefulness and glibness in producing not one example of a language construction, but many, many examples, and she must be accurate and rapid in making corrections. A minimum of written work should be done on paper. To my mind, an abundant supply of wall slate space is the most important equipment of a schoolroom. The benefit of the correction of work done on a wall slate is shared by every member of the class, and innumerable opportunities arise for additional teaching.

The types of original language work done in our advanced grades are the writing of locals, news items reproduced from the daily papers, letters of different sorts including business letters and social notes, personal experience stories, reproductions of stories told in lip-reading and of stories, fables, myths, and articles read but not studied, paraphrasing poems beginning with short narrative poems, and in the junior and senior classes taking up in sections such long poems as Enoch Arden and Hiawatha, and condensing, first, very short news items, and later, long magazine and encyclopedia articles.

This work in condensing we hold to be not only good grist for the language mill, but excellent training to enable the pupil to get the gist of a paragraph, and to disentangle the essential from the non-essential. Miss Helen T. Moore worked out a formula which we use in at least one weekly lesson in the eighth and ninth grades. The procedure is as follows:

1. Each pupil is given a short clipping from a newspaper.
2. He reads the clipping. In the first attempts he takes it with him to the slate; later he writes without reference to the clipping.
3. He then condenses the item according to this formula—
(1) Whom or what is it about? (2) What did — do? (3) What resulted or will result?

The entire article is put into two sentences, with opportunities given to use relative clauses, nouns in apposition, adjectival phrases, and other complex sentence components. Miss Moore has described this work in detail for the Volta Review, September 1925.

This elementary work in condensing prepares the pupil for a type of work which Miss Ervin makes constant use of in the junior and senior classes; she calls it "encyclopedia work." She has in her classroom several sets each of Winston's Encyclopedia, Young Folks' Cyclopedia of Persons and Places, and Young Folks' Cyclopedia of Common Things. She usually writes the subjects on slips of paper and each pupil draws his subject, reads the article, goes to the wall slate and reproduces it. Again this exercise not only provides inexhaustible grist for the language mill, but gives the pupils a wide range of general information, and helps them form the "encyclopedia habit." It also strengthens the "dictionary habit", for a pupil is never allowed to use a word the meaning of which he does not understand.

Week by week the original work of our pupils is used for the "pupils' page" of our school paper. We find publication of the most interesting stories and articles an incentive to choose interesting subject matter and to do careful writing. An Emily Dickinson or a Samuel Pepys may write poetry or record history simply for the joy of writing, but the ordinary human being likes to feel assured of a chance that there will be readers. Our classes take turns in furnishing copy according to a schedule.

Beginning in the fourth grade with an exercise called "pictorial current events", originated by one of our teachers, Miss Addie L. Landers, in which she uses pictures cut from Sunday editions, we make much of the study of current history. Daily newspapers, and such special publications as The Pathfinder, Grit, Current Events, and others supply a very characteristic and needed sort of material for the language mill in that their columns are prolific in the use of idioms and everyday, natural language. Then, too, the newspaper habit strengthens the reading habit.

In conclusion, I wish to say that such success as we have had in teaching English to our pupils in all grades may be attributed to a large extent to the fact that they read. The systematic teaching of reading directed by Miss Ervin for 2 hours of her school day has done much to advance not only our language work but our geography, history, and general information work by 2 or 3 years. Said Francis Bacon, "Reading maketh a full man." We now know that

when we have made readers of these American foreigners of ours we have done the best thing we can do to help them solve the problem of acquiring a use of their mother tongue.

The proof of the pudding is in the eating. I am submitting with this paper, for the benefit of teachers of advanced work who may be interested in seeing the results we get, a number of uncorrected and unrevised papers which are representative of the work done in the department during the month of May. Some of these papers I rescued from wastebaskets; they have been typed to facilitate reading. As we have no senior class this year the work has been done by eighth and ninth grade pupils and junior class pupils, I shall be glad to have these samples of work passed about and examined by any who may be interested in them.

(The specimen compositions exhibited by Miss Joiner, although exceedingly interesting as examples of type lessons and of the quality of work done, were too voluminous to be included in this report. The following is a selection that illustrates the lesson procedure.)

[News clipping]

KINDNESS TO HIS CHUM'S MOTHER WINS HIM \$50,000

Many acts of kindness to an elderly woman, whose only son met death in the Spanish-American War, won for John G. Schumacher, of Ottawa, Ill., a reward in the shape of a legacy valued at more than \$50,000. The gift was provided in the will of Mrs. Elsie Campbell.

Schumacher and Mrs. Campbell's only son, Irving, were boyhood chums. Campbell enlisted in the Spanish-American War. He died on his way home and was buried at sea.

After that Schumacher always looked after Mrs. Campbell as a son would. When she died the members of the Schumacher family were surprised to learn that Mrs. Campbell left them the bulk of her large estate.

- (1) Whom or what is it about?
- (2) What did —— do?
- (3) What resulted or will result?

UNCORRECTED NEWS CLIPPING CONDENSED BY NELLIE BOWMAN, AGE 17, GRADE 9 A;
TEACHER, HELEN T. MOORE

(1) In a town in Illinois John J. Shumacher and Mrs. Campbell's only son, Irving, who was killed in the Spanish-American War, (2) were boyhood chums. (3) After that Schumacher looked after Mrs. Campbell as a son and received \$50,000 because of his kindness to his chum's mother.

Dr. HALL. This paper will be discussed by Mrs. Ida D. Elliott of the Colorado school.

A DISCUSSION OF MISS JOINER'S PAPER ON LANGUAGE WORK
FOR ADVANCED GRADES

(By Mrs. Ida D. Elliott, of the Colorado school)

There should be a very general discussion of this highly important phase of our work, as presented by Miss Joiner. She has outlined the language taught in the advanced grades, and has submitted convincing samples of the language used, showing that very satisfactory results are being secured in the school with which she is associated.

The same degree of success is possible in all of our schools where there is a threefold cooperation:

First, every teacher, from the first- to the last-year class, must be forever alert to preserve what was mastered in the previous grades, to eradicate individual error habits, and to send the class on, better equipped than it was when received. It is a near tragedy when these obvious responsibilities are neglected. The class reactions to such a situation result in a cessation of effort, loss of enthusiasm, and retarded progress.

Second, the ability of the pupils to comprehend and to assimilate must have been well established before they reach the final years in the prescribed course of study.

Third, the presentation of new work by the teachers of the upper grades must be scientific, definite, and enthusiastic. For some reason the thought has seemed to go abroad that anyone should be able to teach the advanced deaf pupils; but the same types of well-trained, high-priced teachers, holding college degrees, who have made our primary departments so eminently successful, should predominate in the intermediate and advanced grades, so that the excellent beginnings made in the mastery of English and other subjects may be consistently carried out throughout the entire course. As an aid in securing these results, the splendid summer schools and university courses now open to teachers of the deaf should offer more in their programs for the upper-grade teachers who wish to keep abreast of the times in their own particular branch of teaching service.

The modified departmental work, as explained by Miss Joiner, has now been quite generally accepted as a helpful innovation. Some of the good results of the rotation system have been stated; yet there are others. In the Colorado school this system was instituted by the present superintendent in a somewhat different way and has been highly successful. The eighth, ninth, tenth, eleventh, and twelfth grades—the latter the college-preparatory class—remain in their respective rooms during the 5 hours of the academic session, the teachers, and not the pupils, going to the various rooms. This avoids confusion and "visiting" in the halls, the carrying about of books and writing materials, and reduces the time requirements for the necessary exchanges.

No one could ask for a better course in English foundation work than the Croker, Jones, Pratt series mentioned by Miss Joiner. Special textbooks for teaching English are most essential in the lower grades, but all specialization as to textbooks and nomenclature might better be dispensed with in the advanced grades. "Original language" and "language drill", while very suitable terms in the lower grades, might be, and are in the Colorado school, supplanted by two broad but definite divisions: (1) English composition and (2) English grammar. Truly enough, these terms are wholly synonymous, but it is a fact that this terminology conforms more nearly to that of the ordinary public-school curriculum, and, though it be a small matter, it is a desirable substitution, inasmuch as our schools are now making every effort to come out of their long years of educational isolation and are endeavoring, so far as possible, to become a recognized part of the regular standardized educational system in the schools for the hearing. Therefore, all terms

which might need any explanation should be eliminated from the upper grades and all antiquated textbooks discarded.

This is for the best interests of our pupils, for by the time they reach the advanced grades they should be, to some extent at least, emancipated from the English handicap with which they entered school and should be mentally equipped to attack ordinary textbooks—and get away with them. Even the method of instruction should be different. They should complete the course, not by the "pouring-in" method, but by the "digging-out" method of individual effort. The teachers must lead in the beginning, but they should keep in the background in the upper classrooms, holding themselves rigidly to the slogan, whenever possible, to let the pupils do it. Deaf children, especially sojourners in institutions, get too much help. They need to be taught greater self-reliance, if they are going to be able to stand alone when they leave us.

Several years ago a letter of inquiry was sent to Gallaudet College asking for a list of the English grammars used as a guide in the preparation of the entrance examination questions. Copies of these grammars were immediately purchased and are in constant use in the college preparatory class, while the first-named, Pearson-Kirchwey's Essentials of English, has been inculcated as a systematic textbook in grammar and composition in the entire course of study for the advanced grades.

As Miss Joiner states, mere memorized knowledge of grammar definitions is of very little value in language development. Modern methods in teaching grammar seem to strive to clinch principles as concisely as possible:

First. State the principle to be mastered.

Second. Give a short "key", based on the association of ideas, as to its meaning.

Third. Illustrate the proper use of the principle in correct English. For example:

The principle to be studied: The present infinitive.

Its key: To + present tense of verb.

Its proper use (1) as subject noun: To skate is my favorite winter sport. (2) As direct object: I like to read (etc., through all the uses of the infinitive).

Grammar, so taught, differs very little from a problem in mathematics or one in carpentry. All sorts of individual projects may be assigned and worked out, not on paper, but at the slates, where they can be studied by each member of the class. If necessary, the teacher is there to clear up any haziness, but the index in the textbook shows on which page to find the desired information, and there should be some very definite personal effort, some "digging-out" for himself, before a pupil calls for help or gets it.

Surely, the reactions must all be favorable to Miss Joiner's and Miss Ervin's ideas about the teaching of idioms. Teach them incidentally, at the moment of concrete need, the teacher keeping a list of those so introduced, to pass on with the class. It is well to keep several copies of Smith's Phrases and Idioms on the reading table for the silent-reading period. We pick up a world of English unconsciously, just from "browsing"; why shouldn't the deaf enjoy it, and derive a similar benefit?

The Colorado school has been most generous in supplying for its pupils such expensive sets as: Pictured Knowledge, The Pageant of America, Lands and People, Compton's Encyclopedia, America, The Book of Knowledge, Bancroft's Works, New Nature Library, etc.

There is also a weekly distribution of the little paper, Current Events—a copy for each pupil. A certain deaf boy has filed all of his copies for the past 3 or 4 years, and still pores over them. His condensed topics show that he not only reads, but also thinks.

As to the great problem of teaching the deaf to read: A child cannot be forced into loving anyone; neither can he be forced into loving to read. He may be encouraged to do it, guided in his selections, permitted to do it, and be given a definite time and place for it. But punishing a child as a means of getting him to study or to read only engenders, in some cases, a bitter resentment and a hatred, for all educational effort. The urge to learn, to read, must come from within. Some teachers try to instill it by use of the pillory of punishment; others by supplying interesting material, and a personal enthusiasm, which is contagious; and best of all, by introducing a bit of jolly good fun along the "long, long trail" of learning. Deaf children respond amazingly to the bait of little snatches of memory gems, short character poems, the chorus of a popular song, dignified old hymns, a simple little prayer, or beautiful spiritual psalms, all recited orally in concert, with one, and then another, acting as leader of the class. Used for the brief devotional exercises, held every morning, they furnish good "starters" for the busy day, and are incidentally teaching better speech, speech reading, and an appreciation of some of the best thoughts written in our mother tongue.

A commencement speaker recently stated that the high schools should equip their hearing pupils with:

1. A strong physical body.
2. The ability to play fairly, and well.
3. The grace of manner to meet people well.
4. The love of good reading.
5. The habit of reverence.

Deaf graduates must compete with hearing graduates from the moment we bid them "godspeed." Are we sending them out, equipped to meet this competition physically, mentally, spiritually? If not, in what are we falling short, and is there a remedy? Not long ago, a highly educated, trained thinker, and student of educational problems visited a school for the deaf. Her observations and deductions were given with a friendly frankness. "I am impressed", she said, "with the fact that your medium for the exchange of ideas is charged with indefiniteness. The teacher speaks. The pupils smile—knowingly. I ask the pupil to write what was said. The pupil's expression changes to blank confusion, and the teacher looks worried. The pupil attempts to write it, and fails in the acid test of comprehension and the use of correct English. Should you not substitute a better medium, or greatly improve the speech-ability reading, in order to get more definite, more practical results?"

Was she right? If so, then this is our challenge if we would more nearly approach our ideal of "normality" for our deaf pupils. To accomplish such a high purpose, the best is none too good—the best

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teachers, the best textbooks, the best methods; for these are all aids in helping our deaf graduates to master their greatest handicap—quick comprehension, and the correct use of the English language.

Dr. HALL. We shall now hear a paper prepared by Mr. Abernathy.

USE OF PSYCHOLOGICAL TESTS WITH DEAF CHILDREN

By Supt. E. R. ABERNATHY, of the Ohio School

Recent years have seen a tremendous development in the construction and use of psychological tests in the public schools. At the present time there are literally hundreds of tests falling in such categories as tests of mentality, scholastic achievement, aptitudes, personality, etc. In the construction of the more reliable of these tests, careful research work has been necessary.

For example, a test might be constructed in this manner, taking two items such as the drawing of a square and a diamond. Present this test to a number of children ranging from very small children to those 11 or 12 years of age, and we would probably find that the younger children could neither draw the square or the diamond. With a slightly older group, some of them could draw an imperfect square, next in order a perfect square and an imperfect diamond, and finally a perfect square and a perfect diamond both. The last group would include most of the older children.

If this test were presented to several hundred children, we would soon find how old the average child would have to be before he might be expected to draw a square and how much older he would have to be before he could draw a diamond. The greater the number of children, the more reliable the average, since it would be more representative of children as a whole.

In addition to finding out such facts as the average age where a child is able to draw a diamond or a square, we could also find what the average child of a given age might be expected to do. These findings are now ready to be tabulated into what are called norms, or what the children are able to do at the different ages. After this has been done, we are able to take the test and apply it. Thus if John Smith, aged 5, is brought in to be tested, we ask him to draw the square or the diamond. If he draws the square satisfactorily but is unable to draw the diamond, we take the assigned value for such a performance and from the averages established on the large group of children we can readily find out where such a performance usually occurs. If the average boy or girl draws the square and not the diamond at 6 years of age, then John, who is 5 years of age, is 1 year advanced for his age. If, on the other hand, the average boy or girl is able to draw the square at 4 years of age, then John is retarded 1 year. Thus we are able to establish John's mental age as far as drawing the diamond and the square are concerned.

We can also find out how John compares with other 5-year-old children. Obviously, some 5-year-old children will not be able to draw either figure. Others will be able to draw both. Between these two extremes is John's performance. By carefully tabulating our original research, we can determine just where John stands in

comparison with other boys and girls of his age. This is a rough picture of the construction of a mental test. Of course, a good test will embody a large number of varied items which when considered as a whole constitute a well-rounded test.

There are a large number of such tests being used today with hearing children. This mass of valuable information about hearing children can in a measure be applied to deaf children. Care must be exercised as to the tests used. Obviously, language tests will present immediate difficulties. The average hearing child at the age of 6 will have a vocabulary of a certain size. The deaf child is altogether different quite apart from mentality. For example, two deaf children, Mary, aged 6, who has just lost her hearing, will have a larger vocabulary than Henry, also aged 6, who was born deaf. Then, there is another factor affecting language and that is the amount of hearing. Of two congenitally deaf boys, one may possess an average of 70 percent of hearing in the speech area and the other 5 percent. Other conditions being equal, the boy having 70 percent will have better language.

Obviously, then, there are two additional factors which must be weighed when giving a language mental test to deaf people. These two, age at the onset of deafness and amount of residual hearing, vary so greatly that no set amount has been assigned to the differences in the comprehension of language. Without a scale of values it is impractical to use mental tests in which the score is wholly or partially determined by the comprehension of language.

The difficulties are apparent when one considers the ball-and-field test, which occurs at the 8-year level in the Binet-Simon intelligence scale. The directions to the subject are: "Let us suppose that your baseball has been lost in this round field. You have no idea what part of the field it is in. You don't know what direction it came from, how it got there, or with what force it came. All you know is that the ball is lost somewhere in the field. Now, take this pencil and mark out a path to show me how you would hunt for the ball so as to be sure not to miss it. Begin at the gate and show me what path you would take." These instructions are always given as indicated. Further explanations are avoided. Not even such encouragement as "show me how you would walk around in the field" is permitted. The word "around" might suggest a circular path which is one solution to the problem. Any simplification of the language of this test would eliminate the scoring of the results by the norms established on the basis of the other wording. Hence, it is most important that the exact wording be followed. On the whole, this is true of other language mental tests.

The signing or the finger spelling of directions in language mental tests does not solve the difficulty. In eliminating language mental tests we are deprived of a large bulk of the best tests which have been used so successfully with hearing people.

In addition to the language tests so commonly used, there are the nonlanguage tests. Many of these could be used without establishing new scorings (or norms) for the deaf. In tests of this type the language involved is not a part of the test, but incident to it. Take for example the Knox-cube test used in determining memory span.

This is done by placing four small cubes in a row in front of the subject. The examiner then takes a fifth block and taps these at regular intervals beginning with a simple combination. Numbering our blocks from right to left, 1, 2, 3, 4, the first combination is 1, 2, 3, 4 or going straight across the row and tapping each block. The last combination is much more difficult being 1, 4, 2, 3, 4, 1. The directions for this test are simply "watch carefully and then do as I do." These directions may be given by taking the fifth cube and holding it in front of the subject and after getting his attention tapping the cubes in order as is regularly done with hearing children. The cube is then handed to him. The validity of the test is undisturbed by this slight variation in the procedure.

Many of the nonlanguage tests involve only simple directions for which gestures can be readily substituted. Others provide sufficient introductory practice material. This eliminates language entirely and puts the deaf child on an equal footing with hearing children. The norms established on hundreds and sometimes thousands of hearing children can be applied. It should be thoroughly understood that there is great doubt about the adequacy of the nonlanguage tests as trustworthy indices of mental ability. Therefore, it is decidedly unsound to state a person's mental age on the basis of nonlanguage tests. In clinical practice with hearing children, diagnoses should not be made from mental tests alone. We should, therefore, be on our guard, being deprived of the most valuable part of mental tests. On the whole, nonlanguage tests should be used to corroborate other findings. If these findings do not agree, then the tests should be discarded as unreliable. Great harm and injustice can be done by arbitrarily and inadequately establishing a child's mental age. Used with care, mental tests will yield results valuable to the teacher and administrator. Instances could be cited where children of superior ability became restless and eventually behavior problems because of improper placement or failure to recognize latent ability.

The educational tests now available should be of immense value to teachers of the deaf. In using such tests care must be exercised in making a selection. It has been found that some of these tests reliably and quickly indicate the educational standing of pupils in the various school subjects.

There are a few points that should be borne in mind when selecting a test. In the first place, in instituting a testing program, objectives should be clearly defined so that the results will present a satisfactory indication of the pupil's educational level. It should also disclose individual and group weaknesses.

The giving of a test in a single subject cannot be called a testing program. More valuable results can be secured by presenting a battery of tests. This battery test might include tests in arithmetic, history, geography, and other content subjects. These tests should be reliably constructed, easily given, and easily scored. Most of the book companies and school-supply houses now stock these tests. Samples can be procured from them. If further information is necessary, consult your State department of education or the education college of your State university.

The results of a testing program ought to assist in the grouping of pupils and also be of material help to the teacher in doing individual corrective work. Sometimes corrective work can be given to groups. Sometimes it must be given individually. Properly selected diagnostic reading tests will reveal whether reading difficulty lies in speed or comprehension. Furthermore, they will indicate the specific type of disability. This information should enable the teachers to do excellent corrective work. It must be admitted that with language achievement tests there is considerable difficulty, since deaf children do not usually make the same errors that hearing children do. Hence, these tests when scored weigh too heavily the mistakes which hearing children make and lightly consider the difficulties deaf children encounter. With the exception of the language achievement tests, educational tests should be given, scored, and interpreted just as they are in the public schools.

Unlike intelligence tests, it is permissible to vary the wording of the directions of an educational test if that appears necessary or desirable in order to make the pupils understand just what they are to do. Achievement tests also differ from intelligence tests in that most of them are self-administering.

A small amount of reading and practice in this field will equip a teacher to use achievement tests with satisfactory results. This is not true of the administration of intelligence tests and, hence, these should be left to the trained clinician. We can, therefore, do as is done in public schools—leave the testing of intelligence to psychologists and make the educational tests ourselves.

Dr. HALL. A paper by Mr. Nilson, of the Arizona school, will present a brief discussion of the subject.

DISCUSSION OF SUPERINTENDENT ABERNATHY'S PAPER

By Supt. ROY F. NILSON, of the Arizona school

Tests and measurements for the deaf will occupy an increasingly important place in the thoughts of the members of our profession as time goes on. "Measurement, the use of standardized subject-matter tests and intelligence tests, has become an integral part of the American public-school system." (Hoke and Wilson.)

We can make use of much of the scientific research that has been conducted for use with hearing pupils. Day, Fusfeld, and Pintner in *A Survey of Schools for the Deaf*, state that the Pintner non-language test and the Pintner educational survey test have been found to be valid and reliable measuring instruments for both deaf and hearing children.

Hoke and Wilson in the preface to the revised edition of "How to Measure" state that the work of testing should be in the hands of the classroom teacher. While this is most desirable, yet it is also difficult of attainment.

Probably most of the superintendents and principals assembled have been faced with the situation of an enthusiastic progressive teacher wanting to procure a score or so of tests to give to her children, though she may know very little about how to proceed. In such a case, one must certainly make haste slowly. The right tests

must be chosen. They must be properly presented and the results correctly interpreted.

More of our teachers should be properly grounded in the use of tests. The popularity of courses in tests and measurements is a healthy sign and strong testimony that they realize the necessity for them. We must realize that tests are the means to an end and not an end in themselves. They must further the true purposes of and highly motivate the subject taught.

Possibly the need for tests has not been so keenly felt by teachers of the deaf because of our small classes. The opportunity for individual observation is much better in our classes for the deaf than in the public-school classes. The weak point in this system is that there is no standardized and permanent record of findings kept.

Although the criticism has been made that specialists in scientific testing have at times lost sight of the total educative process, that criticism cannot yet be leveled at the members of our profession. We are tremendously in need of more standardized group and individual tests. The superintendents and principals in our schools can help by encouraging as many of the teachers as possible to familiarize themselves with methods of testing. Some of these teachers will carry on this work to the place where new and valid tests will be prepared and adapted to meet our special needs.

I do not in any way minimize the importance and value of scientific testing of any sort, but we must be sure we are right before we go ahead. When we begin to measure an individual for his inborn capacity for acquiring intelligence, or in other words his native endowment, and proceed to give him a grade which marks him as a pupil with very superior intelligence or as one who is on the border line of deficiency that rating may be very helpful or injurious to the child depending on the attitude of his teachers. I am confident that Superintendent Abernathy places the right amount of importance on the results of his work, using the results as a guide toward proper instruction. The need is great for achievement tests in speech and speech reading.

Dr. Oscar G. Russell has a wonderful check on the progress made by pupils in speech by means of permanent phonograph records. Aptitude tests for the placement of children in the right vocations await the attention of experienced teachers with the scientific attitude.

The Survey in 1924-25 did some truly pioneer work. Mr. Abernathy's work with young children may also be classed as such. We sincerely hope that he will be able to give us the further benefits of his efforts with both mental and educational tests.

The Goddard (or Seguin form board), Knox cube test and Healy no. 1 picture completion test constitute an especially good series. Form boards are expensive though painted wooden blocks can be made for use in the cube test.

(At this part of the program the convention heard a most stimulating address by Dr. H. W. Wright, of the University of Manitoba. Dr. Wright's subject was "Can Education Save Democracy?")

Dr. HALL. Mr. Hester will now address us on the question of "Visual Education."

VISUAL EDUCATION

(By Mr. MARSHALL S. HESTER, of the Iowa School, Council Bluffs)

Doubtless no one will deny the truth of the old Chinese proverb, "One picture is worth 10,000 words." Especially is this true in the education of the deaf. It can be safely said that deaf children see as much as hearing children. The hearing child understands many of the ordinary things of life through listening to his elders discuss them and by later talking about them with his playmates. The deaf child misses practically all of this learning, which hearing children get outside of school. For this reason, pictures and their discussion in the classroom are of vital importance in the education of the deaf.

According to Douglas, "Modern Methods in High School Teaching", chapter 6, the most worth-while learning takes place when fairly accurate and vivid imagery accompanies the learning of the verbal symbols. The important thing in most instances is not the printed symbol, but the imagery for which the printed symbol stands. If the pupil's experience has been rich enough in the past so that verbal directions alone may now suffice, he has a distinct initial advantage.

The commercial world discovered long ago that one of the most effective and universal means of appeal is through pictures, charts, and diagrams. Advertising experts have learned that pictures attract attention where printed words will not.

Recent tests in the Los Angeles city schools indicate that a gain of at least 15 percent in knowledge of the subject matter involved is made through the viewing of flat pictures pertaining to the subject matter.

In an experimental investigation carried on with both grade pupils and college students at the University of Kansas a few years ago by Dr. Weber, "Picture Values in Education", the following facts were found and inferences made: When children's attention is fresh and they know that several pictures are to be shown, they observe each picture for a duration of about 20 seconds. The observation span for photographs is decidedly less than that for either stereographs or lantern slides. Children observe stereographs a little longer than they observe lantern slides. This may be due to the exclusion of visual distractions and the appeal of the third dimension in the picture. Stereoscopic effect, or perspective, in a picture, all other conditions being the same, increases the observation span by 8 percent, on the average. The addition of color to perspective seems to augment this increase by another 6 percent. Lantern slides can more profitably be combined with verbal instruction than stereographs. This is because they do not detract so much from the verbal comment as do the stereographs. The stereograph is better for individual study; while the lantern slide is superior as a medium for group instruction.

From these investigations we gather that there is a distinct advantage in using pictures of any kind along with verbal instruction, and that the advantage is even greater when the pictures are stereographs or lantern slides.

In a recent survey of the schools for the deaf in the United States and Canada made by Miss Mimi Fandrei of the Tulsa Day-School for the Deaf, the following data concerning the use of visual aids were gathered: Fifty-five schools answered the questionnaire; 42 of these were residential schools and 13 were day-schools. In classroom teaching, 73 percent of the schools report that pictures are used. Thirty-one percent report that stereographs are used, 51 percent report that stereopticons are used. Sixty-four percent of the schools report that motion pictures are used in auditorium classes. Of the 40 schools reporting the use of pictures, 39 report that they are worth while. Of the 17 schools reporting the use of stereographs, 16 report that they are worth while. Of the 32 schools reporting the use of stereopticons 30 report that they are worth while. Only two schools reported that they had no equipment for visual instruction.

From Miss Fandrei's survey we learn that about 65 percent of our schools are using some type of visual aid in the classroom in addition to the pictures cut from magazines and newspapers, and that practically all of these schools find the visual aids are worth while. Add to this the fact that experiments carried out by capable public-school men indicate that visual aids, other than plain pictures, do increase the knowledge gained, especially so when the pupils are retarded. Since our pupils are lacking in language ability it seems that all of our schools should use these more effective visual aids.

Perhaps it is feared that the initial expense is too great for the good derived from the use of expensive visual aids. A good stereopticon, which will last for years, can be bought for \$60 or \$70. However, a combined stereopticon and opaque projector is much more desirable and is well worth the additional expense. Film slide projectors can be bought for \$60 and upward. The individual film slides cost from 5 to 8 cents each, while lantern slides cost about 45 cents. Although the lantern slide is more expensive, it has one distinct advantage over the film slide. It is a unit in itself. Lantern slides may be selected from a set at random, depending on the needs of the teacher, while film slides come in strips of 25 or more pictures which may not be divided. Lantern slides may be made by teachers or pupils at small cost.

A small portable motion picture projector may be bought for about \$300. Educational films may be rented for \$1 a reel and upward. In many cases films of an educational nature may be secured from commercial houses for the cost of transportation. The Department of Commerce and many of the State universities furnish films to educational institutions at small cost or payment of transportation.

The use of these visual aids is limited only by the ingenuity of the teacher using them. They may be adapted to all sorts of work and to all kinds of pupils. However, it must be remembered that they are by no means a substitute for textbooks and written material. Most companies distributing the visual aids have prepared carefully planned specimen lessons for various types of work, which may be had for the asking.

In the preparatory department at the Iowa School a stereopticon is used for projecting slides prepared especially for a primary use. These slides are thrown directly on the slate. A list of the various objects to be seen in the picture is written on the slate to one side of the picture. The pupils, aided by the teacher when necessary, copy these names on the objects in the picture. Then suitable questions are asked and simple answers written. Finally little stories are made up about the picture.

A teacher of intermediate history at the Iowa school uses film and lantern slides extensively in her work. One of the effective devices she uses is in the projection of map slides and opaque maps taken from books. For instance, if the class is studying some phase of the Revolutionary War, the teacher finds a suitable map for that period and projects it on the slate. The relative positions of various bodies of troops are then indicated on the map with colored chalk. Questions are asked which will bring out the important points to be remembered by the pupils. The slate is cleaned and an outline of the map is quickly traced on the slate by one of the pupils, then the slide is removed from the projector. The pupils fill in this outline with towns, rivers, and other prominent features together with the troop movements. When the children have finished their work, the slide is again thrown on the slate. The pupils at once see and correct any mistakes they may have made. This procedure may be adapted to any kind of map work.

In connection with the study of the book, "Kwahu, the Hopi Indian Boy", one of the classes in reading at the Iowa School constructed a model of a Hopi village in a very creditable manner.

Reference books in the school library were searched by members of the class for materials helpful in the construction of the village. Stereographs of Hopi life were viewed and discussed.

The pueblo was built on the top of a tiny rocky cliff, mounted on a table in the classroom. Ordinary yellow-brown modeling clay was employed. Each pupil had some part in the construction.

It is significant to note that stories of Pueblo Indians were in demand at the school library for several months following this project.

Two types of motion pictures are used at the Iowa school for the deaf. One is secured from a distributor of theatrical films and shown primarily for entertainment. The other is an educational film secured from the extension department of the Iowa State College or from some commercial house. Both types of films are used as material for language work in the primary department, the intermediate department, and in the junior high school. The educational films are selected primarily as aids to the teachers in geography, history, English literature, and science.

About 28 entertainment films and a somewhat smaller number of educational films are used during a year. The entertainment films are shown at night, once a week, to all the pupils except those in the preparatory department. The amount of language acquired by the primary pupils from the viewing of these entertainment films is surprising.

The educational films are shown once a week during school hours to the pupils in the intermediate and high-school departments. Al-

though these educational films serve as a basis for written work in all classes viewing them, their chief use is an aid in the teaching of some specific topic.

For instance, one week the film will have to do with the production of coffee in Brazil, and is an aid in teaching the geography of Brazil. Perhaps the next week the film will depict the mining of copper, and the production of copper wire and tubing. It is an aid to both the geography and chemistry classes.

It is of greatest importance that a film be shown at a time when a particular class is studying the subject with which the film deals. For example, the film on coffee and Brazil is of little or no interest to a geography class which is studying the production of rice in China.

The teacher for whom the film is obtained should know beforehand what will be seen in the picture in order that the pupils will receive the greatest good. She should prepare her pupils by telling them what to look for and by asking questions, the answers to which may be found in the film.

Pictures and picture-projection apparatus are not the only means of visual education. In fact, they constitute only a small part of a complete program for visual education. Other visual aids are charts, maps, display racks, specimens, relics, samples, collections, diagrams, globes, demonstrations, dramatizations, museums, sand tables, graphs, bulletin boards, and last but not least, fields trips. All of these visual aids are valuable when used at the proper time and in the proper manner. The field trip holds such unlimited possibilities for success or failure that it should not go by without discussion.

The distinguishing feature of the field trip is its purpose. It involves children's purposes to find out something, to explore, to investigate, to discover. It enables the child to adjust itself to the varied activities of community life. The scope of the field trip is wide. It includes the entire range of industries, occupations, civic activities, plant life, animal life, and earth and sky.

Before a teacher plans a field trip she should ask herself a few questions. Does the proposed trip answer a definite need? Is this trip the only means of getting certain information to my pupils? Will the information gotten justify the time expended in getting it? If these questions can be answered in the affirmative, the teacher should begin preparation for the trip.

The success of the trip depends on the preparation of the pupils. This statement cannot be overemphasized. The pupils should feel the need of the excursion. Questions should be raised in class upon which the field trip will throw light; the field trip will then come as a natural way of supplying needed information and ideas. During the visit the pupils should be encouraged to ask questions and afterward they should be required to make reports concerning various parts of the work observed.

Time does not permit me to go more into detail, but for those who are interested I have prepared a list of references on visual instruction, a list of the sources of visual aids, and a list of the visual aids, used at the Iowa school. These lists may be had for the asking after the meeting this morning.

THURSDAY AFTERNOON SESSION

NORMAL SECTION

The Normal Section of the convention convened at 2 p.m., with Mr. D. T. Cloud, managing officer of the Illinois school, chairman.

Mr. CLOUD. The program for this meeting this afternoon has been divided into two sections. We are to have a discussion on training-in-service for our deaf teachers, and a discussion on better-trained industrial teachers. It perhaps would be better to devote our time equally to both subjects, rather than have both subjects and then proceed with the round-table discussion, because we are touching upon two separate items and in order to do justice to the leaders of the discussion we should, I think, divide the period for discussion. I will ask Mrs. B. M. Riggs, superintendent of the Arkansas school, to open the discussion on Training-in-Service for Our Deaf Teachers.

Mrs. RIGGS. Training-in-service for our deaf teachers differs almost not at all from training-in-service of teachers in schools for the hearing. The methods by which members of the latter group attain additional educational qualifications are, generally speaking, by taking correspondence courses, by attending summer schools, by extension work, by leaves of absence for study or travel during the regular school year, and by attending teachers' association meetings and conferences.

It would be trite to elaborate upon the successes of the many deaf teachers who have profited by these various methods of in-service training. One concrete example of such actual performance in each of the above-mentioned groups will suffice.

Teacher A, let us call him in order to keep the personal element out of the discussion, is a graduate of Gallaudet College. He is now teaching in a school where the increases in salary depend definitely upon proof of professional growth. This spring he completed a correspondence course with the University of Chicago, with the very satisfactory grade of B. He found the work easily within his ability and in it much of satisfaction.

Teacher B has spent several summers at one of the leading national art institutes, experiencing very little handicap due to his deafness.

As to extension work, a group of deaf teachers in one of our schools will take advantage this next school year, with the aid of an interpreter, of a course in psychology, taught by a professor from the State Teachers' College, the class being arranged primarily for a small group of normal students.

Leaves of absence for study or travel during the regular school session would present no bar to the deaf teacher, nor does attendance at professional meetings. Obviously, examples of the former group are few; of the latter group, many.

I shall digress here long enough to say that it is perhaps the duty of the administrative officers of the schools—superintendents and principals—to make this sort of professional effort both possible and profitable to the teachers. These administrative officers are generally in a more advantageous position than the teachers to know of available opportunities.

In conclusion, I wish to call attention to an article appearing in the June (1931) Journal of the National Education Association, contributed by Dr. Ned Dearborn, director, Institute of Education, New York University. After enumerating such agencies for "in-service" education as the teachers' institute or conference, correspondence courses, summer session study, and so forth, he calls attention to the lack of unity in such work, contrasting the situation in "pre-service" education in which unity is a dominant factor.

"The time has come," he says, "when an integration of some of these methods of 'in-service' education should be attempted."

The integrating element of "in-service" education, we find, lies within the fact that the teacher's province is not limited by the four walls of the schoolroom. He says:

A teacher is the guardian of the social order; a teacher stands always in the spotlight of public scrutiny; a teacher is judged by the influence exerted on the development of youth morally, intellectually, and physically, and also by the nature and amount of participation in the important affairs of life outside the school.

The field of education is unsurpassed in its opportunities to serve humanity.

Any sort of study, then, which will give a teacher a broader understanding of life within or without the classroom does not violate the unity of "in-service" education. Playground courses, courses having to do with Biblical or modern history, health courses, all contribute to a fuller appreciation of life.

"Such a program," concludes Dr. Dearborn, "has no end." It solves the problem for many of us as to just what kind of courses deaf teachers in service will find profitable.

Mr. TOM L. ANDERSON. Considering this subject in its bearing on summer schools for deaf teachers, I recall that I was once of the opinion that if special training facilities were to be offered to the hearing teachers of the deaf by any one of our particular professional organizations, the same facilities should in all fairness be offered faithful deaf teachers who have carried on for years without benefit of such organized professional assistance. The Belleville Convention, 8 years ago, adopted a resolution in which I was greatly interested; pledging the support of this organization to the furtherance of plans for summer schools for deaf teachers. I do not know why nothing has been done toward carrying out the spirit of that resolution.

However, I shall now fairly admit that I do not see the good that can come to our deaf teachers through expensive special assemblies for the particular study of subjects which practically all of these teachers are well fitted to carry out independently. Deaf teachers are too few and too widely scattered to make practical a centralized training course arranged solely for them. Furthermore, I question the wisdom of special training courses for segregated groups of our teachers of the deaf, who rightfully should progress as one professional group when we consider that all are expected to work together harmoniously within the family which is the average school.

We need professional betterment in the manual ranks even more than we need it elsewhere. I have maintained that the big discovery in educational work is due to be made by the manual teacher who de-

vise a better method of advancing the so-called "backward" pupils, and not so likely by the oral teacher working with especially gifted pupils. Discoveries are not made accidentally by untrained workers, but come rather through the intelligent effort of trained people. I have little sympathy with the line-of-least-resistance theory that the less educated the manual teacher is, the more contented he or she will remain when placed in charge of a more or less "hopeless class." Such a theory does not lead to a really scientific effort to benefit the percentage of humanity struggling in the lower grades of mentality.

One of the most interesting ideas advanced for offering the benefits of summer school to deaf teachers was in the form of a proposition that classes be organized in some regular college under an able interpreter, who would undertake to work between the professors and the deaf group, in the regular class sessions. I do not know why nothing ever came from this proposition, but it is readily apparent that any plan based on this idea would have to be well financed, and it is possible that the lack of an optimistic management has prevented development along this line.

At the present time, it seems to me that there are at least two ways in which the objectives of this summer school might well be attained without the trouble and expense of an attempt to conduct a national summer school for deaf teachers of the deaf fostered by this convention or by any other professional agency. In either way, the assistance of this convention would be required more in the planning and advisory capacities than in the active promotion of school work; such as the drawing up of a uniform course of study, with correlated reading, which might be followed by deaf teachers generally, regardless of their location.

Plan no. 1: Offer to qualified individuals the same opportunities and privileges for normal training and observation in the various schools which for some time have been offered to young hearing "teachers-in-training."

When I look over the outline of the normal course arranged by the Western Pennsylvania school, for instance, I am impressed by the realization that a similar course particularly adapted to the specialized work of the manual teacher would constitute a measure of professional advancement, where the facilities of the school were offered to guide manual teachers through it. I do not know of any school which extends the courtesy of such a normal course to qualified young deaf people. Why is this?

Plan no. 2: To extend the professional benefits of plan no. 1, and to provide advanced work to the experienced manual teacher, I suggest that a serious effort be made to lead desirable deaf teachers into both residential and correspondence work with local educational institutions offering uniform courses in education leading to degrees which the intelligent deaf teacher is well able to follow without the comforting services of an interpreter.

Frankly, I believe that too much stress is placed on the need of an interpreter by deaf teachers of the deaf in suggested plans for summer training courses. Where numbers of deaf teachers are grouped together the service of an interpreter is both an aid and a comfort to all concerned. But the intelligent deaf individual has

repeatedly demonstrated his ability to progress without the aid of an interpreter, and all should make more of an effort to do so. They will find plenty of cooperation from instructors. Take the recent instance at Ohio State University, when two deaf young men frankly admitted to the professor that they could get little through lip-reading, and he very sensibly excused them from attendance at class and made it possible for them to get what they wanted through independent study and then examined them on the work thus carried on. I am informed by a member of the faculty of Nebraska University that faculty committees are now frequently recommending modifications in the accepted class routine to fit special cases, and that it would be entirely reasonable for deaf students to ask for modifications, and if properly petitioned the average faculty will doubtless grant the modification without affecting the value of the credits sought. The modification deaf teachers might reasonably ask would be the substitution of correspondence work for the residential requirement, and the advancement by examination whenever the student felt sufficiently prepared. This modification would eliminate the embarrassing effort to keep up in recitation work, which is, frankly, the greatest dampener of enthusiasm among the deaf when college work is considered and constitutes the greatest element of unprofitable time.

I earnestly recommend that this convention appoint a sympathetic committee to draw up a course of study considered profitable for deaf teachers who already have special experience on which to build and let us start by making this a uniform requirement in the preparatory stage. And let this committee further represent the convention in petitioning the faculties of such colleges as may be designated by prospective deaf students, asking in an impressive way for modification of the class requirements without in any manner cheapening the credit gain.

And I further earnestly recommend that the managements of the various schools make self-improvement and educational betterment attractive to their deaf teachers in every possible way and especially in the way of offering definite hope of financial advancement where there may not be hope of promotion to deaf teachers who are able and willing to pursue an independent course of educational betterment.

ROUND TABLE DISCUSSION: BETTER TRAINED INDUSTRIAL TEACHERS

Mr. CLOUD. We will now proceed with the next topic on the program. The subject is "Better Trained Industrial Teachers", and it is my duty to open the discussion. I am pinch-hitting, so to speak, for the original leader, who was unable to come and requested me sometime ago to substitute for him, with the understanding that he was going to supply me with the necessary material to lead the discussion. That material arrived the day before I left and I have not had much opportunity to look it over.

The question of better trained industrial teachers brings up the question of the fields to be served and the ends to be met, the types of teachers' training courses being afforded at present and the types of organizations for training teachers. The fact that there is a

serious problem confronting not only those who are engaged in teaching the deaf in a vocational way, but also in the hearing field, is easily ascertained by referring to Bulletin 150 of the Trade and Industrial Series, no. 42, issued by the Federal Board for Vocational Education, Washington, D.C., in 1930. I am going to quote extracts from this report, merely to open the discussion. First, it would perhaps be better for us to understand briefly the nature of the act. The National Vocational Education Act was passed in 1917 by the United States Congress and made available to the States, with certain appropriations for the salaries of teachers and also appropriations for the training of such teachers. A fund was provided for the training of vocational teachers, beginning at \$500,000 for the year 1918, which has increased by definite steps each year until the sum of \$1,000,000 was reached on July 1, 1921, and annually thereafter. The act specified that such training shall be given only to persons who have had adequate vocational experience in the line of work for which they are preparing themselves as teachers, or who were acquiring such experience as part of their training.

(Mr. Cloud here read excerpts from the report.)

The types of teachers' training courses being offered at present is brought out in chapter 3 of this pamphlet, which, I might say, may be secured from the Superintendent of Documents at Washington for 30 cents.

So I think that any of you who get this document will be very much interested in its contents. I also feel that possibly some of the inadequate vocational work that is being charged to our profession can be traced to what has been brought out in that report, that there has been a very deficient, or, at least, a not well-organized plan for teacher training, in spite of the opportunities afforded by the National Vocational Education Act. In our own work, of course, we are bound more or less to feel the reaction of that which is going on in the public schools. I would like to state that in Illinois, after July 1 of this year, the following requirements have been set up for teachers in our school: Minimum age must be 21 and the requirements are, graduation from high school, thorough knowledge of the trade, and ability to impart instruction; 5 years of practical experience, teaching experience preferred; and good physical condition. Those are the requirements that all teachers in our school will have to meet after July 1 of this year.

This topic will now be discussed by Mr. Skyberg, of the Minnesota School.

MR. SKYBERG. I doubt that many of us appreciate what may be gained by a study of the pamphlet which has been referred to, from the point of view of the training of vocational teachers. I was in the service of the Federal Board of Vocational Education, myself, in 1919, and I know a great deal of the reactions which that Board experienced in trying to develop vocational training for the rehabilitation of ex-service men, and I know, as the report stated, that ordinary training facilities were not equipped to furnish training for those who were to be trained at that time. But during the past 12 years very definite standards have developed and I feel that if we might study the Board's report fully we might arrive at something

more comprehensive than we can attempt to cover in a group meeting such as this.

In the first place, we must think of certain factors which enter into our vocational work. The objective has been referred to. The objective is the type of employment. When we talk of the type of employment we must study the requirements of that objective, of that field of employment. When we know those requirements we know the things that must be met in training persons for that employment. When we know the problem we must find a suitable individual to train our children, our boys and girls.

It is not always possible for us to appreciate the changes that are constantly taking place in vocational practices. Suppose we have been teaching some definite vocation for 10, 15, or 20 years. It is not possible for us to appreciate the changes that have taken place in employment requirements, unless we have had an opportunity of going out and seeking employment ourselves. You cannot get that sort of thing by study; you have to go out and experience it. So my reaction, when we speak of summer training courses for vocational teachers, is to recommend this very practical course: Go out and work on your job in the summertime. Go out and train. Go into a cabinet shop. Go into a shoemaker's shop. Go into a barber's shop; tailor's shop. Go and live the vocation over again. When you come back you can tell your boys or girls just what they are going to meet. You know it. You have again realized what your employment requirement is going to be.

Now, when it comes to the matter of training someone to act as a teacher in a vocational class, you must take into consideration teaching capacity, the capacity of the individual to teach his subject. He must have certain qualifications which all teachers must have. We depend upon the training places to recommend those persons. For instance, when we write to Gallaudet College, the report is that a candidate is preferable in this vocational field, not so good in that one, very efficient in this other one. The faculty has passed judgement on the candidate and we know the individual possesses a certain standard of aptitude and a certain standard of teaching ability that we can take and use.

Now, when that teacher comes to us, not all of us have our vocational courses so organized that we can take a brand new teacher, put him into the schoolroom, give him a printed card, and say, "This is what we require you to do." That would be very easy. But when a teacher comes untrained, unless we can provide that teacher with adequate supervision in the form of a supervisor of the vocational department, or place that teacher in as an assistant to an experienced teacher—that teacher is not being given a fair opportunity. It is not fair to bring an inexperienced vocational teacher into a vocational class and expect him to do what we want. He is not equipped for it right away, and it is not fair to our children to have them wait till that teacher is brought up to the point where he should be. That training must come in employment. So, I would say that between the period of training in school and the time of beginning to teach let us require a certain amount of experience in actual employment. Let the teacher come to us with a knowledge of how

difficult it is to go out and secure a job. Let him know what these boys and girls have to face when they go out and let him look at the thing from that point of view. It is only in that way that we can bring our boys and girls to some balanced psychological resistance against the difficulties they must meet when they go out.

I would suggest again that we get this pamphlet, as many of us as can, and study it, because the persons in the Federal Board know what they are talking about. It is the largest educational group in America—in the world, I believe, for that matter. They have the most highly trained experts, both in the fields of employment and in the fields of study and research, and they do get down to bedrock; and if they have anything that we can absorb and use, I think it is well worth while to dig into it.

Mr. CLOUD. I will ask Mrs. Craig to open the discussion as to how this affects those who are engaged in teaching girls.

Mrs. CRAIG. When Mr. Skyberg mentioned that men teachers should take summer work in some particular industry before going into the teaching field, I was wondering if he had any suggestion to make as to what he would expect of his women teachers. I don't know whether we can give girls training in home economics or not. I am more or less inclined to feel that the biggest detriment of a home economics course is to train girls to become better home makers. There are other fields of work have been discussed that girls may enter and I have been wondering if Mr. Skyberg had in mind any particular line of work that a teacher of vocational subjects to girls might be required to enter for her course.

Mr. SKYBERG. This summer our teacher of beauty culture is working in a beauty culture parlor in St. Paul. We could very well take our teacher of machine sewing, send her to a factory where they used that machine, and let her learn what is required on the job by doing it. You could do the same with your domestic-science teacher. In summer camps where women are needed to cook and serve, practical vocational experience may be gained. It is very valuable experience. Those things can be done if we set our minds to it.

Mrs. CRAIG. I know the summer I had in New York meant a good deal to me from the point of view of the people you meet there. They are rather hard to get along with, and that opened my eyes very much.

Mr. G. I. HARRIS, of Colorado. I don't want to open up an old sore, but the question of the salary of the industrial teacher always comes up. We had to take a teacher from the public schools this last year, and to get the man we wanted we had to pay more than he could get in the public school. We got a man that we are well satisfied with, but we could not find a deaf man who had the equipment for the place. If we could get some way of preparing a certain number of deaf men, help them to get this training that would enable them to come into a school and take over part of the vocational training, we would solve one problem that is staring the schools in the face today. As it is, when we want a shoemaker we have to look for a shoemaker who is out of a job. We take a shoemaker who is out of a job and expect him to make deaf boys into such good shoemakers that they won't be out of a job. There is one of the fallacies that I bump into

when I look around into this work. I would like to get the benefit of someone else's experience. Where are we to get these men? We know the public schools fall down in vocational work. We can't take a man who cannot keep himself in a job and expect him to prepare deaf boys so well that they won't be out of a job. We have got to find some way of getting these teachers for our courses. I don't think we have it yet. That is the point that I had hoped to see answered today.

Mr. CLOUD. I would not, of course, attempt to make an answer, but I was just wondering if it was not an admission that in years gone by your particular department has not suffered by being unable to use any of your own products. Now, I am not saying that in any tone of criticism. We have had conditions in our own school very similar to that sort of thing. In fact, I am rather confronted with it now, but I expect to find out of our own products somebody who is physically, mentally, and morally capable of doing the very thing that you spoke of a minute ago.

Mr. SKYBERG. In our school we have graduates, of course, that are good, but take a boy at carpentering, say, and put him through school. When he comes out he is only a journeyman at the best, possibly only an apprentice, but we hope to make a journeyman of him before we turn him loose. We would want one who would go on to Gallaudet and after he gets out of college he would have to follow his trade for at least five years before he would be competent to take that course in our school and handle it in the way we want it.

Mr. CLOUD. It would seem that the schools that have been in operation so many years might at least find someone. However, that is not the point for discussion, other than this, that in Illinois we set forth those requirements on the basis of at least 5 years' experience in industry or vocational work of some kind. That would be of extreme benefit to anyone attempting to teach in our vocational department. It may be that if the demands of your department are such that you are unable to find exactly the type of individual you want, even among your own group, then, of course, you are compelled to look elsewhere.

Mr. TRAVIS. I was just going to speak about shoemaking. If a boy has gone through his trade experience in school, that comprises 5 years at least of work at the bench, or whatever he is working at. Wouldn't that answer for the 5 years' experience, if he is a capable workman when he goes out?

Mr. CLOUD. No, sir.

Mr. TRAVIS. Well, that is all poppycock then. If they demand 5 years' experience, and the boy has it, but it won't count, what does it all amount to? Here is a boy who is trained for the trade. He has worked at his trade in school and he is able to go out on a job right now. Hasn't he had his training? Hasn't he had his experience?

Mr. CLOUD. No. He has had training, but not experience.

Mr. TRAVIS. Your qualifications are that he must be a graduate, have scholastic training, take a high school course. That would mean he would have to go to Gallaudet for 2 or 3 years—that is, as far as our graduates are concerned. When he comes out, why would

this experience he has had in the shop not answer the purpose? If a man has had actual experience enough that he can go out and make a living, it is evident that he has had actual experience.

Mr. CLOUD. It is evidence that he has been well trained.

Mr. TRAVIS. I am asking why it would not count in Illinois.

Mr. CLOUD. The law says it will not count.

Mr. TRAVIS. That answers the question, then. I asked our instructor in shoemaking before I left how many boys he had turned out, who have gone through the work under him, he could recommend as instructors. He said, "I have three. Two of them you could not get, because they are running shops of their own and making more than you would pay them as instructors. The other one has just finished his course this year. He thoroughly understands his work and he can instruct. He has been my assistant and has been instructing. He is out now working and making a living at it." I just want to know why that wouldn't count. This boy has had actual training in the trade and the training for teaching.

Mr. CLOUD. Has he had any business experience?

Mr. TRAVIS. He has been down town for a year and worked in the shops.

Mr. CLOUD. Then he would get credit for that.

Dr. HALL. I just wish to emphasize Mr. Skyberg's point of getting as much training as possible by summer work. We have boys in Gallaudet College in the printing class who go out and work in the printing shop on Friday and Saturday, or any afternoon, and also work in the summer time. That experience is allowed in their course and a good deal of credit is given to the training they get in school, and after a year or two in college they can get their union card.

Mr. CLOUD. Yes. It would most assuredly count in accumulative experience, whether they had been getting it in school or anywhere else.

Dr. HALL. Advanced pupils go out in the summer and work at a trade and get that experience they are asked for when they want a job.

Mr. ANDERSON. It seemed to me to be a most important point that Mr. Skyberg made in regard to the betterment of our vocational teachers. In regard to summer training, if the much-discussed certification plan is to require vocational teachers to amass academic credits during the summer, in order to secure certificates, it is apparent that the plan is being drawn up by academic people, without due regard to the peculiar differences between the departments. The conviction has grown out of my experience that we cannot manage these vocational classes on an academic basis. We are up against a different proposition when we get into serious vocational work, and heretofore we have been trying to solve our vocational department problems along academic lines, mainly because the management of the schools has an academic background of training, and is accustomed to solving academic problems. In this particular work we are up against certain teacher-training problems, for instance, which I do not believe can be solved through recourse to the usual teacher-training methods.

For one thing, we are not going to continue teaching vocational subjects on a course arranged by academic people, with academically trained teachers, and get away with it unless we are content to have our efforts properly evaluated as "manual arts" work. If we are to raise standards and make our training seriously vocational, we must find a new line of attack. Mr. Skyberg says that we should go to the Federal Vocational Education Board for our ideas. If we do so, we will find them radically different from the ideas of accepted academic practice, especially as to teaching methods and teacher training.

Mr. Skyberg says that in the summer the vocational teacher should get out and find a job in his trade, get up against the practical situation he is trying to train his pupils for. To bring this about has been my hardest problem over a period of 10 years' experience. During this time, I have expounded that theory to my teachers year in and year out without success. I have not been able to get one of them to undertake to obtain outside experience in his trade. Right now several of our vocational teachers are doing farm work. It seems entirely reasonable to expect them to put in at least one month in active contact with their several trades in order to catch up with the newer ideas and trade practices, which constantly change. A teacher who will not do this simply gets into the situation where he cannot help but teach obsolete trade practices to his pupils, no matter how passing fair the class may show up in its daily work.

What pressure, then, can we bring to bear on teachers who are off for three months, to get them to feel that this summer training experience is necessary? We can put the subject before them, just as we are doing now, but this alone will not bring results. Some definite requirement must be set up. It might be a good plan, instead of telling the vocational teacher to get certain credits in summer school, to allow him the same credits for getting and holding a job in his trade for a stated time during the summer. That would be the most practical requirement you could make of vocational teachers, certainly better than requiring them to go to summer school and take an academically arranged course.

While I have the floor, may I ask if The Vocational Teacher magazine has been of any value to the profession during the past year? I don't wish to go into details to any great extent, but I'd like to explain that this paper was started in the first place to continue through the year just such helpful discussions that we are having here right now. If those of you who are interested in the subjects we are discussing would write helpful suggestions for this paper, those suggestions would be before our teachers throughout the next 2 years until the next meeting of the convention, and by that time there would be a great deal more intelligent discussion of the questions before us. The columns of this paper are open freely to all of you for such discussions and they would be a benefit to all, especially to the vocational teachers we are trying to improve.

MR. CLOUD. I think Mr. Anderson can feel assured that the committee that has to work on the certification of teachers will very properly look into the matter of taking care of the vocational group.

MR. BLATTNER. I am very much inclined to agree with Mr. Skyberg and Mr. Anderson in regard to their contention that our industrial teachers should go out and get a little experience and hard knocks in the world of practical work, and then come back and teach it to the children. But Mr. Anderson refers to the fact that, as he says, he has been preaching that for 10 years and has not been able to get any of his industrial teachers to go out and get that experience, and also refers to the fact of getting jobs on farms to recuperate their health. Well, in these days of depression it might be very difficult for those industrial teachers to go out and get jobs, and how can we tell them to go out and get jobs when they can't get them? We would have to hunt the jobs for them and then turn them loose. It is a good practical thing if we can put it over, but it is not the most important thing I would say. The most important thing, I believe, as regards the training of our boys and girls for industrial occupation, aside from the actual occupation they are learning, is to give them good academic training, broaden their minds so that they have conception beyond the narrow walls of their shop. We ought to give them more of academic training than is provided in our State schools today. I think we should raise the standard of our industrial teachers from an intellectual standpoint as well as the standard of vocational training. Our graduates as they go out of school are hardly broad enough from an intellectual standpoint to go into a shop.

Now, I just want to refer to a case in our own school. We have a man there who is a splendid shoemaker. He was educated in a school for the deaf and he is a very good man for his place and produces results, as far as he can. He can make a fine pair of shoes. He can fit anybody's foot. A number of fellows with broken feet, club feet, have had shoes made by him and he produces good fits. I have worn perhaps half a dozen pairs of shoes that man has made for me. But if you required that man to prepare a course of instruction for the shoe shop from beginning to end, through the entire period of instruction in the school, he could not do it. Well now, if you are going to raise the standard in our industrial department, I believe you should require more than mechanical work. I have had difficulty in getting industrial teachers. I have to hunt all over the country sometimes to secure such a man as I would want to have. I have had considerable difficulty in getting tailors. We have had now three fellows in the tailor's shop since the tailor's shop was started. I have applied to the college and Doctor Hall tells me he doesn't know why it is they don't get more tailors at the college. What I want is a tailor or a shoemaker who has had an education above the education that would be given in our State schools and I want to get them from Gallaudet College. Now, if you send boys to the college and let them take that literary training and then after they have gone through college teach them these trades, why, that is the thing that we want.

MR. TRAVIS. I would like to ask Mr. Blattner whether that teacher who could not make up a course of study can turn out boys who can make shoes and mend shoes.

MR. BLATTNER. Well, he has done it.

MR. TRAVIS. Then what difference does it make if he can't make out a course of study?

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MR. BLATTNER. We like a certain dignity in that part of our work.

MR. TRAVIS. Oh, well, if it is dignity you are after, instead of proper instruction in shoemaking, that is another thing.

MR. BLATTNER. That class of shoemaker and carpenter and printer should be a thing of the past, I think.

KINDERGARTEN SECTION

The kindergarten section was called to order at 2 o'clock, Thursday afternoon, June 25, 1932, by the chairman, Mrs. Margaret C. Smith of the Colorado school.

A paper written by Miss Sarah E. Lewis was read.

INFORMAL SPEECH READING IN THE FIRST-YEAR CLASS

By MISS SARAH E. LEWIS, of the South Dakota school, Sioux Falls, S.Dak.

The above topic has been assigned to me for this paper. I shall try to touch upon it here and there, although in places I shall wander far afield. These remarks are primarily intended for the teachers new in the work, not for the old-timers. Those of us who honestly try to teach orally know that speech reading in any grade needs no defense. We know what has been done and what can still be done. But I know that some of the younger members of the profession get discouraged. They say, "What's the good of it all, anyway? The children go right out of the schoolrooms and sign all the time." It is to these teachers that this paper is addressed.

It is my personal opinion based on personal experience that the average class of average beginners can very nearly double its accomplishment if we teachers only think it can. We don't expect enough of the children, therefore, they don't accomplish by the end of the first year what they might. This affects their accomplishment the second year, that affects the third, and so on. Finally, in their last year or two in school it is one wild scramble to cram enough into their sluggish brains to enable them to pass their final examinations or to meet college entrance standards. All experienced upper-grade teachers know this. Now, mind you, I am fully aware of the old advanced-grade teacher versus primary-grade teacher feud. Haven't I been in enough of the battles, on one side or the other, to know? We have this subject always with us; it is good for a fight any time. But the fights just make bitter feelings and don't help one bit. The only way to settle this argument is for each teacher to teach for a long enough time in each department to get the department viewpoint. Then she will see the right and wrong on both sides. The fact remains that there is a scramble at the last minute. The upper-grade teacher and the upper-grade pupil must work strenuously to get through. How can some of this struggle be avoided? The only way I know is to set higher standards for every grade, and begin with the first year in school. You say, "Our standards are high." Perhaps they are, but if we can't get higher ones we'd better stop teaching. If we are satisfied, we are in a rut and must get out; or like poor Jim Jay, we'll get stuck fast in yesterday.

How can we raise our standards? One of the best ways I know of is for each school to choose a practical outline of work which is not

too easy, then stick to it in all grades unless there is a mighty good reason to change. In no other way will the work in all grades dovetail. There are many excellent outlines being used all over the country, but each school should use one, not several, no matter how good each one might be. Another means is to seize every possible way of enlarging the mental horizon of each class. Tell the class about things that are beyond its ken, or let the children read something once in a while they don't quite understand. It stimulates their curiosity and aroused curiosity is the first step toward education. It isn't necessary for them to understand it all, nor for them to be able to reproduce it either orally or written; but plant the seed, the flower will bloom beautifully enough to repay us for the effort.

Nowadays we are doing much more in reading in the lower grades than was ever done before, and are planning to achieve more and more in the future. Twenty years ago even bright deaf children were not usually taught to read print until the last part of their first or even until their second year in school. Why didn't we do it? Frankly, I don't know. For the same reason that we shall be doing many good things in 1950 that we are not doing now, I suppose. But now we teach children to read both print and script from their first school days. Reading and speech reading go hand in hand. I consider it of the utmost importance that speech reading should keep pace with reading, especially in the lower grades, beginning with the first year in school. If our English words were less fantastically spelled, this admonition would not be necessary. Deaf children could then read words, learn their meanings, and know from their spelling how to pronounce them. But this, alas, is not so. We must say the words or read the sentence to the class often enough for the pupils to realize how each word or phrase looks on the lips. Then, if the class has been sufficiently drilled on the element charts and on speech combinations, we can write the words, mark them for pronunciation, explain the meanings, and lo, our class has new words in its vocabulary. I well remember a fourth-grade boy whom I once taught, telling me one morning that he had seen a basket-ball game the night before at the "imka."

I couldn't understand what he meant, so I asked him to write it. It turned out to be the Y.M.C.A., of course. If I had given that word to the class in speech-reading, as I should have done, for the boys went there quite frequently, the child would not have mispronounced it so badly even though I had not had time to drill on the speech. The teachers of all lower grades, certainly of first-year grades, know beforehand just which words in a reading lesson the class will not know how to pronounce. Before the reading lesson is given, the teacher can make a list on the blackboard of all these words and mark them for pronunciation. She need not drill on the meaning, for very likely she wants to find out if the pupils can guess the meaning from the context. She need not drill on the speech unless she wants the class to add these words to its vocabulary, but she can and should repeat them to the class several times, either alone or in the phrase in which they occur, pointing to them as she says them. Doing this consistently, will to a large extent do away with the bad speech results of teaching children to read and write words they can't speak.

We have done this in our class of beginners in the South Dakota school this year, and neither their teacher nor I can see any but good results. Our class of beginners is a more or less ungraded one, for our school is small and we must put all our beginners in one class. Two of them are immature and do most of their work with a normal student, but the others are doing fairly uniform work. It is the middle of April at this writing, and the class is well into second-year work. They have a larger and more natural vocabulary than our previous classes have had. They reproduce, with no help from the teacher, class journals of from 18 to 25 sentences, and can write original ones of almost the same length, making very few mistakes in language or sequence. They use the compound subject and compound predicate, transitive and intransitive verbs, past tense, a number of adjectives besides colors and numbers, direct and indirect objects, a few infinitives with and without objects, prepositional phrases, adverbs and adverbial phrases, possessives, plurals, some verbs in the present and future tenses, and some past negative verbs. They can ask and answer a few simple questions using the hidden object or unknown-action method.

We hope to teach a few more question forms before school is out. They are having very little trouble with problems in addition and subtraction using combinations to 5. The speech of the pupils in the class as a whole, omitting the two immature children who must repeat the work next year, would be rated as average and excellent, and the speech reading would also be classed as average and excellent. One boy is low average in both, but he has such an excellent language sense that we are promoting him.

Experience teaches us that real success is often the result of what at first appears to be dismal failure. We have all known children who seem to be miserably poor speech readers who develop into good ones and sometimes into excellent ones if we just hammer away at it long enough and cheerfully enough. Also we know that of two bright deaf pupils, the better speech reader usually has the better and the more natural language. Don't hesitate to tell the class things you've never told a class of young deaf children before. Talk to the children and talk naturally, using normal expressions instead of stereotyped, stilted ones. You will be amazed at the good results you will have. And don't take the conversations of us old-timers too seriously. We do get disheartened many times, but not one of us would say that it is better to teach the average class of deaf children manually than orally.

Miss QUINN. Mrs. Smith asked me to discuss Miss Lewis' paper. In accordance with the method taught at the Minnesota school, I can endorse what Miss Lewis has said. Keep building up the vocabulary and keep to a well-ordered course of study. Do not take different parts of texts used at other schools. Find a good method and stick to it. I don't know just what Miss Lewis means by teaching script and print at the same time. It is confusing to teach script with the printed word. Minnesota children always have printed books available and they soon learn to associate the printed word with the script. By the middle of the year the pupils read print as readily as script, having unconsciously acquired the knowledge.

Mrs. SMITH. You never called the attention of the children to the difference?

Miss QUINN. I was very much surprised to find that they correlate the two. Of course there is a similarity of words and they recognize this at once. Before the end of the first year the children are able to read the printed word. Printed words are pictures in the child's mind the same as the written word.

We see by the work accomplished by Mrs. Smith that she has wonderful success with children of preschool age, but I do not know very much about that. Of course in our classroom, regardless of the work the children accomplish, we always speak naturally to the child. We know every word is not understood but it gives the child related words and expressions and he can go forward more rapidly. I cannot speak with authority on kindergarten work. The Minnesota children come to us at a later age.

Mrs. SMITH. Can anyone give us any information on informal speech with kindergarten children? Some schools take children 4 and 5 years of age, others much older, so of course results obtained would be very different.

We will now hear what Mrs. Hurd has to say about "Vocabulary of a First-Year Class."

THE VOCABULARY OF A FIRST-YEAR CLASS

By MRS. ANNA C. HURD, Principal of the Rhode Island School

It will be conceded by all, I think, that the vocabulary of a "first-year class" should consist of the words and phrases that the children can make use of as soon as possible. But we must take into consideration that first-year classes differ materially in age and ability.

In my own school the class of children in school for the first year are 4 to 5 years of age. We do not call this a first-grade class, but a nursery class.

The vocabulary acquired is an understanding through lip reading of the names of objects with which the children are surrounded, and simple directions.

Practically no articulation work or writing is attempted. Development of voice—babbling and tone work, using the piano and drum—is given daily.

Nor is this class rated the second year in school as a first-grade class. We call it preparatory, and possibly one half of the work that is usually expected of a first-grade class in many schools is accomplished.

In this so-called "preparatory class" articulation is stressed. All the elements of speech and combinations are taught. As soon as a combination is mastered it is incorporated in words—the words the pupils wish to use—and the meaning of which in many cases has been learned the previous year through lip reading, and we begin building up the speech vocabulary.

The requirements of the children should be the guide in building up the vocabulary.

Teach words and expressions that the children need to express their ideas, wants, likes, etc., as fast as possible, and as soon as the

articulation of an expression is mastered insist upon its use in school and outside whenever an occasion occurs. It is at this period that much can be done toward forming the speech habit. It is then, in our school, with children who enter at 4 or 5 years of age, not until they have been in school 2 years and are approximately 7 years of age, that what is usually accepted as first-grade work is attempted.

However, there is no doubt that after the 2 preliminary years as I have outlined, more language and better speech and lip-reading can be acquired during this third year in school than if children enter at 7 years and are plunged at once into real first-grade work.

The children have a greater understanding of language, know better what words to select to express their thoughts, so that spoken language comes more readily.

It is the natural method. A hearing child during his first and second years of life is hearing language, and observing its application before he begins to use spoken language himself. Keeping silent-reading matter before the class, building up on charts sentences similar to what the child wants to say, is proving a valuable help.

The spoken and written vocabulary for this first grade should include the personal pronouns, the present tense of such verbs as to like, to want, to love, to have, the past and future tenses and the interrogative form of the verbs that the pupils need to express their ideas, an indefinite number of nouns and their plurals, a few qualifying words, the names of the pupils and other proper names that the children wish to use.

The lip-reading and silent-reading vocabulary may be more comprehensive. For example: I can tell such a class an amusing story about one of the children, or about my cat or dog, and they will understand very well, or they may be able to comprehend such a story from silent reading, especially if an illustration accompanies the print, but they, at this point, will not be able to tell such a story themselves. They absorb, as it were, the meaning, and later on this will bear fruit.

(The subject was further discussed by Miss Amelia De Motte, of the Illinois school; Mrs. Margaret C. Smith, of the Colorado school, and Miss Quinn of the Minnesota school.)

AURICULAR SECTION

The auricular section of the convention met at 2 p.m., Thursday, June 25, 1932, Mr. Leonard M. Elstad, principal of the Wright Oral School, New York City, chairman.

A paper prepared by Mr. John Dutton Wright, founder of the Wright Oral School, was read:

USING NEGLECTED HEARING REMNANTS IN SPEECH TEACHING

[By JOHN DUTTON WRIGHT, founder of the Wright Oral School]

For nearly 40 years we of the Wright Oral School have used as an aid in speech teaching small remnants of hearing that are possessed by a large number of pupils in schools for the deaf, but which are usually neglected.

This paper is not, therefore, theoretical. It is a statement of facts, the truth of which has been demonstrated and the usefulness established by long practical experience.

Many children enter schools for the deaf possessing a sufficient remnant of hearing to have enabled them to acquire language and speech through the ear if they had received from infancy the type of attention that was necessary to have the sounds of speech reach their brains through the channel of their imperfect hearing.

How has this happened? It has resulted from the operation of the universal law of sound transmission. This law is taught us in our school textbooks as follows:

1. The intensity of the sound reaching the ear varies inversely as the square of the distance between the ear and the source.
2. Pupils who possess a certain residuum of hearing within the speech range can be taught to perceive the sound of the human voice and to interpret that sound into percepts, concepts, and actions.
3. Auricular exercises do not, as a rule, increase the actual amount of hearing; the sensory phenomena of hearing remain about the same.

The aim of auricular training at this school is threefold, i.e., the teaching of a vocabulary through the ear; the improvement of the speech; and to effect an increased activity in the psychic acoustic centers.

Most speech is addressed to a baby at distances of 6 feet, or more. It is usually not very loud even when it is spoken nearer than 6 feet from the child.

Now a word spoken to a child at a distance of 1 inch from his ear makes more than 5,000 times as much impression upon his hearing mechanism as the same word spoken with the same loudness 6 feet from his ear. If it were spoken twice as loud at an inch as it was spoken at 6 feet, it would make more than 10,000 times as much impression. Roughly figured these figures are correct.

For many years I maintained, from a purely theoretical standpoint, the truth of the statement made above, that if many of the children who enter our schools for the deaf at 7 years of age without either language or speech, had received from infancy the type of attention needed to have the sounds of speech reach their brains through the medium of their imperfect hearing, they would have been able to speak and to understand spoken language by hearing.

Then there came to my school a young girl of 14 who understood what was spoken close to her ear and who could carry on a conversation by telephone with her parents, but whose remnant of hearing upon careful test proved to be only 20 percent in one ear. The other ear showed a total loss of hearing.

Naturally, I supposed that the girl's hearing had been gradually growing worse and that she had acquired her speech and language before she was as deaf as at the time of her entrance as a Wright School student.

I found, however, that this was not the case. There had been no noticeable change in her power of sound perception from very early infancy. Her father was a physician and her mother a highly educated woman and they discovered the deafness when the little girl was a tiny baby. From earliest babyhood they had talked to the

little girl with their lips almost in contact with her ear, using the same language that is customarily addressed to a child, but always in correct English and no "baby talk".

So, for the 14 years they had been doing exactly what, from a purely theoretical standpoint, I had said would teach a very deaf child to understand language, and they had demonstrated the truth of my assertion.

That young girl would have been classed as a "deaf-mute" by doctors and the general public if her parents had not so early adopted this method of communication. As it is, she is a "deafened adult" with normal language and excellent speech.

In order to assure myself of the accuracy of our tests, I asked Dr. Harvey Fletcher, of the Bell Laboratories, who has developed the audiometer, to examine the young girl. He put her through the most searching tests the laboratory afforded and obtained the same result—about 20 percent of hearing remaining in one ear and nothing in the other, and she has phenomenal use of this small percent due to her mother's training and the location of her islands of hearing.

It is a pity that we cannot instruct every parent of every deaf child while the child is still a tiny baby. But we cannot. And if we could, how many parents would persist, year in and year out, in the procedure we urged upon them?

When the child enters a school for the deaf, however, there is no excuse for those who control that school if they fail to set in operation at once the persistent procedure that wisdom and knowledge dictate to be the one course for the highest development of that child.

This procedure consists in: first, obtaining a careful and thorough test of the child's hearing; then, if any remnant of 25 percent or more of hearing is found in one or both ears, to provide that child with an opportunity each day for not less than 10 minutes to hear language spoken very close to or in contact with the ear, and for ears in which some power of sound perception remains, auricular training should be given under such circumstances that the child will gradually learn to associate ideas with the repeated language, just as children with normal hearing gradually acquire a hearing vocabulary. It is imperative to start the process of enabling the pupil to hear words spoken by himself for the sake of his own speech.

Until recent years, when electrical aids were invented and improved, and especially since modern amplifying apparatus has been available, we had to depend upon a hand cupped about the ear, or upon a two-way tube into which the pupil could speak after listening to the same word spoken by the teacher. With present available apparatus it is much easier to arrange to have the pupil listen to the teacher and himself in alternation as in normal conversation. It is also easier to conduct the practice exercises necessary to enable the pupil to acquire a hearing vocabulary.

But even after it has been definitely determined that a pupil possesses a remnant of hearing sufficient to be made use of in improving his speech, we have a long process before us of training that hearing to discriminate between different sounds.

If you will consider the procedure that is well known to you of teaching a hearing child music, either vocal or instrumental, and will recall how that hearing child cannot in the beginning recognize small differences of pitch, timbre and tempo, but by cultivation his ear gradually acquires an astonishing delicacy of discrimination, you will understand why we cannot at once get the help we will eventually get from the deaf child's imperfect hearing. We must go through much the same process with him that the hearing child goes through.

We combine this preliminary training in the distinguishing of sounds with the acquisition of a little hearing vocabulary expressing ideas. Notice that I say "ideas", for we are very careful not to allow the pupils to form the habit of listening for elementary sounds, but for ideas that are associated with sounds. It is a great stumbling block to language acquisition if the habit of mind is formed of listening first for sounds, then translating those sounds by conscious thought into words and the words into ideas.

To avoid this we place, for example, before the little pupil a toy railway car, a comb, and a key. The words for these ideas have widely differing sounds and are comparatively easy to distinguish. We speak the names of the three objects in random order and, at first, show him the object named. Soon he is able to point to the object we have named and with no intermediate thought of the sounds ah, oh, and ee, he has learned to distinguish between them and they in turn suggest an idea to him. In this way we train him to leap at once from the sound to the idea, just as the hearing child does. Then we can take three other words containing one or two new sounds, as, for example, eye, nose, mouth, and he learns to discriminate between i, o, and ow with no thought except of ideas associated with those sounds.

In training him to observe the differences between his own speech and that of his teacher we need to remember what happens in the case of a child with perfect hearing. The hearing child does not at once recognize the difference between his incorrect pronunciation of a word and the proper way. And even when he has observed that his way is wrong he is not able to correct it without many trials.

So we have to be very patient in our efforts to get the little child with imperfect hearing to recognize the difference between his utterance of a word and the way the teacher speaks it.

If you have ever taken lessons in a foreign language from a teacher to whom the language you are struggling to master is his native language you have often had the experience of pronouncing the words after your teacher in a way that sounded all right to your ears, and yet he shook his head and repeated the word again and asked you to try again and again. Finally, when you did succeed in recognizing that your way was different from his, still you could not exactly imitate him till you repeated the word over and over many times.

So, in making the remnants of hearing possessed by our pupils of use to them in the correction of their speech, we have a long process of preliminary training to go through before we are able to adequately correct the pupil's speech by the aid of his hearing.

In this training we must provide our pupils with the opportunity not only of hearing their own efforts of speech, but also to see their own mouths while they are speaking and compare what they see with what they see the teacher do when she speaks the words. It is quite likely that you do not realize how much of help you yourself got from your eyes when you were learning to imitate the speech of others.

In order to accomplish this we need, not only a 2-way tube, or a cupped hand, or one of the wonderful new amplifying devices on a multiple circuit by which a pupil can hear both the teacher's speech and his own, but we must also conduct the speech practice before a large mirror in which he can see his own mouth as he utters the words after observing the utterance of the teacher. The hearing child had all this help when he was learning to talk, and the little deaf child needs it even more.

When the percentage of hearing is not too small, we have found it better to begin the process with the unaided voice, speaking very near, or in contact with the pupil's ear. If this does not adequately reach him, then we employ one of the powerful amplifying devices with multiple connection. But after, as it were, breaking the ground with the amplifying device, we often revert for part of the time to the unaided voice. Sooner or later we make use of the amplifying device in many cases, for the ability to use one of the new electrical aids efficiently is of great importance to the pupil as it extends the range (in distance) of his hearing, and as it also greatly relieves the teacher in many cases. A hearing aid is to the ears what glasses are to the eyes.

It requires some practice to accustom the partially deaf child to the successful use of the various aids to the hearing, and that training should be given in school in connection with the regular school work, as well as in the special auricular training periods.

So we set about our task of training the pupil's brain to associate ideas with the sounds of speech as made very near his ear. We also give him an opportunity to listen to his own efforts to reproduce the sounds which he both hears us make and sees us make as he looks into the mirror before which the exercises are conducted for the purpose of effecting his speech through the combined help of his eyes and his ears. It is because the distance from our lips to his ear is so short that, except by looking in a mirror, he cannot see the mouth of his teacher; we must face the mirror during these speech auricular exercises.

And now I need to impress upon you a fact, that, though you undoubtedly know it, you may not have considered it in its bearing upon this problem of training the deaf child to use his slight remnants of hearing.

Hearing is an automatic, unconscious operation, but listening is a conscious mental act that requires the exercise of will power.

When we hear without listening, we are unconscious of hearing. The vibrations of a striking clock affect the mechanism of hearing whether we are listening or not. The disturbance set up by these vibrations is transmitted to the brain automatically, but, unless we are listening, at least to some small extent, we are not aware that

the clock has struck. It is a common experience of all, to be within hearing of a chiming clock, or some other sound, like a factory whistle, or a train, and yet to be wholly unaware that the clock has struck, the whistle blown, or the train passed. This was not because we were physically deaf, but because for the moment, we were psychologically deaf. That is, we did not give any conscious attention to the vibrations that produced the disturbance in our brains.

To listen requires mental effort. Mental effort requires the expenditure of nervous energy, and the expenditure of nervous energy causes weariness.

To do something consciously wears us. If it is something we have not had much practice in doing, it requires more attention, more expenditure of nervous energy, and therefore tires us more quickly than doing something we have done many times and are expert in doing so that a great part of the effort has been transferred to our automatic apparatus.

In training the deaf child's brain to use imperfect hearing in the correction of his speech, we must keep constantly in mind this distinction between hearing and listening. Just having the impressions conveyed to the brain by the hearing mechanism is not sufficient. Those impressions must be consciously received and listened to. The child's brain and nervous system tires with this effort very quickly at first, and the moment that listening ceases all value of the lesson is gone. The line is down from the brain to consciousness, which in this case means mind.

Another fact that you undoubtedly know, but may not have considered in this connection, is that we must present the ideas to the yet undeveloped brain of the child in such clear, incisive, vivid, that is interesting form, that an impression will be made upon the gray matter. Also that this indentation of the gray matter must be deepened and made more permanent by many repetitions of the impression that produces it. The infinitesimal corrugations of the brain seem to be the storage channels of experiences and ideas, and they are not usually made permanent by a single operation, but by frequently repeated impressions digging the channel deeper and deeper till it is there to stay a lifetime.

The child has to be trained to listen. At first he does not have the power of mental concentration that is needed. This slowly develops. It is accurate to say that the deaf child with a small remnant of power to perceive sound has to be taught to hear. In order that he may use his remnant of hearing to help correct his speech, he must be taught to recognize differences of sound, and he must also be helped to learn to imitate the sounds.

The results of this slow mental and physical training as shown in an increased naturalness and intelligibility of speech are finer than can be attained in any other way at present known to us.

Amplifying transmitters can be used to relieve the strain on the voice of the teacher and to extend the distance at which sound can be perceived, but the best initial results are obtained by the use of clear, strong, but not very loud voice uttered close to the ear without interposing any other device. Experiment will quickly show whether the nature of the child's deafness is such that a tone of low

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pitch is heard better than a high-pitched tone, or vice versa, and whether a man's or a woman's voice will carry for the type of deafness of the child in question.

It is also desirable to experiment as to the distance from the ear that the lips of the speaker can be and yet have the pupil hear the sounds. But the distance should always be kept slightly less than the maximum possible in order to relieve the strain and increase the clearness with which the sounds are perceived.

There should always be considerable practice with hearing aids with the hope of eventually leading up to the use of the commercial loud-speaking telephone, that is now installed for the use of the hard of hearing.

It may have been noticed that I have not, as yet, made any reference to the possible increase, as the result of the exercises, of the actual power to perceive sound, as distinguished from the more successful use of the power possessed from the beginning.

Many years of practical, daily exercises in auricular training have shown that it is exceedingly rare to have a measurable change take place in the actual percentage of hearing as a result of the auricular exercises.

There is always a steady increase in the ability of the pupil to use his hearing and this acquired skill gives the impression that he actually hears better. But careful comparison of the audiometer measurements before the training is begun and the measurements made after years of the work rarely shows any increase in the measured power of sound perception. The improvement in the use of the hearing gives the impression of an increase in hearing power, but it appears to be a mental, or interpretive improvement, not a physical one. But what does it really matter, if the pupil understands better by ear than he did before, whether the implement with which he works, the hearing, is better or only that he uses it more skillfully?

If we are able, as we are, to help the child to improve his speech and to acquire a hearing vocabulary through the use of his imperfect hearing that is the important thing.

I should be happy if this paper had the effect of setting all teachers thinking how they can help their pupils to make better use of the small remnants of hearing that so many of them do possess. The teacher should feel no discouragement if the results for the first few weeks, or for the first year even with the very young, are small and rather unsatisfactory. It is an educative process and that is always slow and laborious. I assure the teachers that in the end they will feel amply repaid.

May I briefly recapitulate the procedure:

First. Conduct a careful and complete test of hearing ability.

Second. If 25 percent or more of hearing is found to remain in one or both ears, devote much time to developing a power of discrimination between sounds as used in words. But so conduct the practice that the proper mental habits are formed for most efficiently using the hearing in the comprehension of spoken language in the ear. That is, do not permit the formation of the habit of listening for sounds primarily and having to go through a translation process to get the ideas expressed by the sounds.

Third. To make the imperfect hearing of service in the correction of the pupil's speech, supply an adequate means of enabling him to hear his own speech as well as that of the teacher, and also the means of observing his own mouth as well as that of the teacher while speaking.

A tremendous dividend will result from the second part of the process, for the pupil will acquire a considerable ability to understand by ear spoken language. In that way, also, he will gain a conception of speed, rhythm, and inflection of speech that can be given him in no other way. This is fully as important as the actual correction of pronunciation. Some people think it is a larger element in intelligibility of speech.

The continued practice in the program described in the second stage will readily accomplish the speech correction without special exercises if it is conducted correctly, and it is for that reason that in my Little Handbook of Practical Auricular Training I devote nearly all the pages to this form of ear practice.

Mr. Elstad explained that in the Wright Oral School the pupils use individual amplifying devices.

Mr. ELSTAD. We shall hear from Miss Marie K. Mason on the subject of acoustic education.

ACOUSTIC EDUCATION OF THE DEAF

[A problem in research, worked out in a large State school for the deaf]

By MISS MARIE K. MASON, of the Phonetics Laboratory of the Ohio State University

"Acoustics is the science of sound", Webster says, while the Standard Dictionary, Funk & Wagnalls, elaborates its definition somewhat, so as to read: "Acoustics is a department of science treating of sound."

Helmholtz divides acoustics into two phases: (1) Physical acoustics, and (2) physiological acoustics.

Physical acoustics concerns itself with the theory of the motions of elastic bodies, and as such does not fit particularly into the subject of this paper. Physiological acoustics aims to investigate the processes that take place within the ear itself. This theory of the sensation of hearing belongs to a natural science. This section of science treats of the conduction of the motions to which sound is due, from its entrance into the external ear, to the expansions of the nerves in the labyrinth of the internal ear.

Failure of any part of the hearing mechanism to transmit or interpret these motions or vibrations of sound results in loss or imperfect perception of sound. Deafness is a triple defect. It may be:

1. *Functional deafness*.—Due to a faulty conducting mechanism in which case the sound wave in its passage through the external auditory canal, reaching the drum membrane, encounters, for example, a perforated drum, or imperfect functioning of the cantilever system of ossicles, etc.

2. *Auditory nerve deafness*.—The result of a disturbance in the auditory or perceiving mechanism.

3. *Cerebral deafness*.—Which is due to the lack of sound patterns in the brain.

Since we do not know how sound is perceived by deaf children, that is, whether an external stimulus is conveyed through a residuum of hearing, or conducted through the bone immediately to the nerves and on to the brain, it is expedient that the acoustic education of deaf children be of such elasticity as to embrace any and all means of developing speech.

Acoustic education therefore should include:

1. Auditory stimulation by means of the human voice.
2. Training of the auditory perception of sound by means of electrical amplification, such as the radioear, audiphone, etc.
3. Training of the auditory perception of sound by means of musical vibrations, e.g., the piano, drums, and other musical instruments.

4. Training of the tactile perception of sound through the vibrations of musical instruments (the piano, etc.), as well as the vocal chord vibrations in the larynx, and the sympathetic resonance of these vibrations in the face of the teacher.

Classifying these four methods thus, does not mean that they are to be considered as individual, detached means of effecting auditory stimulation. On the contrary, they may be looked upon as separate threads of the auditory scheme, intricately interwoven upon each other so as to make up the entire pattern of hearing. When a child's perfect hearing pattern shows signs of ravelling (to preserve the simile), it is sometimes almost impossible to tell just where the deafness lies; it is likewise difficult to decide through which means the child receives the proffered auditory stimulation. In other words, any one or all four methods may be used to bring about the desired effect of supplying for the child, what nature has withheld.

This was the basic principle, upon which was laid the foundation for the acoustic department at Ohio State School for the Deaf. At the invitation of Dr. J. W. Jones (of esteemed memory), I began my work of acoustic education in the September of 1928. Before the opening of school the choice of room had been made, with reference to light, size, distance from other rooms, and insofar as possible freedom from extraneous noises. A grand piano (of not too ancient vintage), a bass drum, tambourine, and some bells comprised the original equipment.

The school had recently acquired a second-hand 1-A audiometer in need of repair, and since it was necessary to make a tentative, although immediate organization of the work, Dr. Jones, Mr. Abernathy, the principal of the school, and I, decided that a brief survey of the entire pupil body of over 500 should be made as quickly as possible. At first only those children with the least degree of hearing loss were chosen; such as those who would come under the notice of the classroom teacher. To these were administered the voice and whisper test, followed by their classification insofar as possible, into groups conformable to the degree of hearing loss and the grade in school.

A second hurried survey discovered those with varying degrees of deafness, capable of stimulation by means of artificial amplification. A third investigation brought in large numbers of pupils capable of hearing vowels and, in some cases, simple nouns. The remaining children were those of the totally deaf category, with whom rhythm work at the piano or vibration work in speech was to be used.

Besides the voice and whisper test, in the absence of any amplifying device, it was necessary to devise some means of setting standards of hearing for classification, no diagnostic interpretation being attempted. Accordingly, mailing tubes and a 10-cent megaphone served as measuring sticks, and with this crude equipment classes were formed into which were grouped children of apparently the same degree of hearing and of the same mental age. Another factor affecting this classification was the fact that time for acoustic training was required to be taken from the industrial periods so as not to encroach upon the academic work, and, as will be readily seen, this was by no means an easy task nor was it conducive to the most advantageous groupings. However, in spite of meager equipment and other obstacles, it was with a certain sense of gratification, that after audiometer tests of these same children in the following year and subsequent reclassifications, we discovered that with but few exceptions our early classification remained almost intact.

The problem of classification however imperfectly solved, my next concern was the adaptation of practice material to the acoustic needs of the individual group. This was not so difficult so far as concerned the groups of pupils having but slight hearing loss. While an amplifying device would have expedited the work with these students, nevertheless, by arranging them in the form of an inverted semicircle (if one might call it such), with the backs of the chairs drawn closely about the teacher's chair in the center, it was possible to speak in a slightly louder than normal tone so that each child could hear, if not the first time, at least upon several successive repetitions. Pronunciation, inflection, modulation, correction of bad voice quality, were the immediate needs of this type of pupil. These were, for the most part, older children who after a prolonged attempt to keep abreast of their companions in the regular classes in the public schools had finally drifted in as special pupils in the school for the deaf. These were the pupils who had carried over from babyhood an infantile or a lateral lisp, various letter substitutions, faulty phonations, extremely low or extremely high-pitched voices, or imperfect pronunciation, such as ge-gáw-ro-phy for geography, and incorrect inflection, such as car-pén'-ter for carpenter.

I found poems, songs, history, geography, and music practical, interesting, and extremely beneficial for use with these children. One group of younger pupils fitted into this class and an aim was made to give during the acoustic period any work of the grade suggested by the regular class teacher, as well as conversational language and reading.

The groups of children requiring sound amplification presented a more difficult problem, but an insatiable eagerness to hear, on the part of little deaf children and the instructor's determination at all

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odds to assist in bringing this about, form a combination that does not easily go down in defeat. A crude amplification device was pressed into service for use with these groups of children. It had been introduced the year before in some research work which I had done under the direction of Dr. G. Oscar Russell of the Phonetics Laboratories of Ohio State University. The instrument consisted of a long metal tube, closed at one end, and about $1\frac{1}{2}$ inches in diameter. Distributed throughout its length were spigots fitted with rubber tubing to which were attached head sets. These were of the variety accompanying dictaphones, which do not amplify tone but merely shut out all extraneous noise. An ordinary funnel inserted into the open end of the tube served as mouthpiece for the speaker. This device was made to serve all groups of students. Those who could hear the sound transmitted were asked to depend solely upon their hearing, while others were required to supplement the auditory with the visual impression, by not only listening to, but also watching the speech of the instructor.

Systematic acoustic education was begun with all of these groups. Vowels were given first, then phonetic drills, progressing to words and simple sentences. The language of the regular classroom was used whenever possible, and it was most interesting to hear the monotonous "I bowed" of the classroom become "I bowed" in the acoustic room.

The original intention was to conduct the acoustic department for 1 year as a research problem, and if the result proved satisfactory to continue it the following year. At the end of the first year, it was decided not only to continue the work, but to enlarge the department and to appoint an assistant teacher, so as to give a greater number of children the advantage of acoustic education. Because of financial conditions the assistant did not materialize, but Christmas time witnessed the installation of a Western Electric Multiple Audiphone, with 12 headsets and 12 volume controls. This permitted the enlargement of classes and a consequent increased number of pupils receiving training. With the advent of the audiphone the work progressed rapidly, and more accurate training in pitch and modulation could be given. The piano and audiphone were used for this, and occasionally as a reward for conscientious effort, the classes were surprised and delighted with a period in which they were permitted to merely listen and enjoy music.

There is no attempt in this paper to go into a lengthy discussion of rhythm and voice work; these are subjects presenting stupendous problems of their own upon which volumes can be written. The intention is rather to show their correlation in the acoustic education program as worked out, with limitation, and against innumerable obstacles, in the Ohio State School at Columbus.

Into my school-day program, which the first year extended from 7:45 a.m. to 4 p.m., were fitted as many classes in voice and rhythm as I could take care of over and above the classes in acoustic training. All periods were of 20 minutes duration each, except those for very young children, and all classes received daily instruction. A graded curriculum of rhythm and voice training was attempted, extending over the simple babbling exercises of the kindergarten child, to the more advanced phonetic combinations in song and

poem of the older student. Voice work received special stress; exercises to improve quality, correct faulty elements, and to develop continuity of speech were included. Rhythmic appreciation of various tempos was developed and their interpretation expressed in bodily movement. Previous to the establishment of a special department of acoustics and rhythm but little if any instruction was given by the busy classroom teacher. Some training in rhythm and voice was given to her own class by any teacher who knew music.

A phase of rhythmic instruction inaugurated as systematic training in the new department, was that of the percussion band. The instruction is begun at the piano where the children are taught to recognize the vibrations set up by two-four, three-four, and four-four time; also the slow-measured pulse of the dreamy lullaby, in contrast to the sprightly elastic lift of the schottische, or the regular accented beat of the march. Interpretations of these are first given by clapping, beating time, bodily movements, and finally in the use of the percussion instruments including rhythm sticks, bells, tambourines, cymbals, castanets, drums, and a toy xylophone. The melody is carried by piano accompaniment, the rhythm teacher directing. The original band was organized in the school year of 1926 and 1927, and was presented at the meeting of the convention, which convened at Columbus in June 1927. Training was continued with this same group of children for the 3 years following, at the end of which time they were playing a repertoire of about 30 selections; including, besides marches, waltzes, such classical numbers as Barcarolle from Tales of Hoffman, Poet and Peasant Overture. The interpretation of these various orchestral numbers was worked out by the teacher and pupils, with the exception of one number which the children proudly claimed as their own interpretation. In general the procedure was as follows: A new selection was played several times, the children receiving the tactile impression; then each part was played separately, the class volunteering the interpretation, and the particular instruments capable of expressing the vibratory movement, together with the manner in which each instrument should be played. It was interesting to watch the expression on their eager faces, as some particularly attractive rhythm appealed to them, and as frequently happened, a scramble for their instruments followed by a spontaneous swinging into the movement of the melody.

Frequent invitations were accepted for the original percussion band to appear on programs given by schools, various organizations, parent-teacher associations, and the like. A great source of gratification was the honor of being asked to play before the National Federation of Women's Clubs at Memorial Hall in Columbus. The crowning event, however, was the transportation of this group of children to Cincinnati, Ohio, where we gave a broadcasting program of instrumental music and songs over WLW, as part of the activities of the Ohio School of the Air in the interest of special education.

Other groups of children received the benefit of this training, and in 1929-30, there were three distinct groups; a baby band of little 6-year-old children, an intermediate group of second-grade children, and the original group.

A novel device to render the vibrations of a piano stronger and more easily perceptible to touch was that of a false piano top constructed of thin wood and raised dome fashion in the center. On trial the children's verdict was that the vibrations were much stronger than with the regular piano top, but unfortunately not much research was carried out, because at that time there was but one piano, and as it was used to answer every purpose the special top could not be mounted as easily and quickly as desired.

"Of what value is the training of deaf children in the use of percussion instruments? Is it practical?" This question is asked on every turn. The answer is: "Well, is it practical?" Certainly not, if by practical one means a bread-and-butter livelihood. We are not training these children to become musicians. It is practical in its carry-over into speech, into other subjects, and into various student activities. Practical, too, in the discipline, spontaneity, alertness, interest, vivacity, and eagerness with which all their daily tasks are inspired. But what a wealth of cultural value! Are we not really educating when we teach a little deaf child, to see through music the beauties of nature, the blue of the sky, the twittering of birds, the shimmer of water in the moonlight, the love of his mother, and the heart of his God?

(Motion pictures of the work at the piano and of the percussion band at the Ohio school were shown. Miss Mason also demonstrated the teaching of pitch with the piano.)

Mr. ELSTAD. Miss Mason's paper will now be discussed by Mr. A. C. Manning.

ACOUSTIC TRAINING FOR THE DEAF

By Supt. A. C. MANNING of the Western Pennsylvania School, Pittsburgh

The excellent report given by Miss Mason on the beginning of her work in the Ohio school, a remarkable demonstration of which we saw at the Columbus convention 4 years ago, reminds us that fine equipment is not necessarily a fine school, nor is it essential to success in a class of deaf children taught acoustically. Miss Mason made a success of her work with meager equipment before Dr. Jones gave her the equipment she needed.

In undertaking any new work there is the grave danger of making of it a fad. There is serious danger that its results, in demonstration, may prove nothing more than a publicity stunt.

The education of the deaf itself was at one time considered a useless fad and when those devoted priests in the centuries gone by demonstrated that the deaf could be taught, their demonstrations were condemned as mere stunts.

The late Alexander Graham Bell, as we all know, was condemned as a faddist. Little did he dream of the vast consequences his experimentations would have upon the life of all humanity when he spent endless hours upon the instrument that was in his hope to make little Mabel Gardner Hubbard hear.

It is hardly possible that out of our efforts will grow such gigantic results as came of Dr. Bell's ridiculed "toy", but in our work there must be research. There must be progress. The school life of our

deaf children is all too short as it is to squander precious hours on fads, but holding fast to that which has proven itself good we should press forward toward those things which are before and give our children the very best that modern science and experimentation prove worth while.

Many sins have been committed in the name of oralism. And frankly, in my judgment, much of the prejudice against oralism is due to wretchedly poor oral work, the miserable failures made by so-called "teachers" who recommend themselves as having been "trained by a teacher who was trained at Northampton" (and the Clarke School must suffer the indignity of the imposition) while the cause of oral education and the deaf children unfortunate enough to be in their care must suffer the serious consequences.

Let us hope that in acoustic work our profession protects our children from whatever quackery may attempt to foist itself upon them.

With the acquisition of a few scientific terms it is easy enough to talk glibly about residual hearing and acoustic training for the deaf, but Miss Mason who knows much more than I about the subject assures us that we do not know how sound is perceived by our pupils. I think she might well have added we are never quite sure just how much hearing our pupils have. Residual hearing is an elusive, evasive thing. Each child may have a certain amount of a certain kind of hearing today and an altogether different amount tomorrow, dependent upon his physical and nervous condition.

Those of you who seem to have accomplished most in the development of residual hearing (I do not mean in rhythm), judging by reports made at previous meetings of this sort are well favored in having more money than has the average school, with small classes made up of children having considerable hearing. We can all theorize and dream dreams of what we would like to do for our children, but theories are not facts, and our results must be influenced largely by conditions existing in our several schools whose funds are limited and whose classes are too large for a great amount of individual instruction.

I have no patience with the superintendent who shirks his responsibility in dismissing the subject of acoustic training with a shrug of the shoulders as if he can evade this issue any more than he can evade giving an account of every dollar entrusted to him to spend. I believe no superintendent's skirts are clear in this matter until he has honestly determined whether or not he has any children with sufficient hearing to profit by its development and has done his utmost to develop it. And here may I add I believe no greater folly can be committed than for a superintendent to rush into this phase of education and purchase a radioear or what-not just because every other school is doing so, just to keep up with the Joneses. There is no excuse for adopting a policy just to be popular or to be considered up-to-date. There may be schools where there are no children with hearing enough to be trained profitably.

The survey made at our school by Mr. Day and Mr. Fusfeld in 1924 and the subsequent survey made by Dr. Shambaugh's otologists convinced us that there was a field for auricular work among our pupils. We have made haste slowly for we are naturally conservative in spite of some of our radical tendencies.

In the rhythmic phase of the work we have not gone so far as Mr. Driggs, whose work was so beautifully portrayed last Tuesday evening. We have done some rhythmic work in voice training that has much improved the speech of our children, but I wish to enter a protest here against the oral recitation of hymns by our pupils being designated as "singing." We have in our school one or two children who have enough hearing almost to carry a tune, but I am yet to be convinced that deaf children can sing. Let us give their efforts the proper designation. Let us not deceive ourselves into calling it singing, for in so doing we deceive our pupils. We do not deceive the public. On the contrary we are liable to discredit ourselves and our work in the eyes of the parents of our pupils and in the eyes of people generally.

In stating that our pupils recite hymns orally and in having the children themselves designate it as "recitation" we are on safe ground which will not bring upon our heads justified ridicule or condemnation.

Finding a need for auricular training and having determined with a fair degree of accuracy the amount and quality of hearing your children have, the next question is what are you going to do about it and how?

This question is a most serious one. There is no substitute for knowing your subject—remembering that you are teaching a child and not teaching a subject. Training the hearing cannot be done in a haphazard sort of way. It must be done intelligently, systematically, definitely, and persistently. The blind leading the blind land in a ditch. An unqualified teacher attempting to teach a hard-of-hearing child can do only injustice to the child.

We, therefore, need teachers especially trained to cope with this difficult problem. During Dr. Russell's most admirable and illuminating address last Tuesday, every teacher, principal, and superintendent present, no doubt, longed to know all Dr. Russell had to tell us on the subject of acoustics. In my judgment every training class in the country should have presented to it in a week's course of lectures by Dr. Russell, Miss Mason, or by somebody equally well informed, as much as possible of the physical and physiological facts pertaining to the faculty of hearing, not that every teacher should be a teacher of acoustics nor that every child is capable of acoustic training, but every normal student should be a potential acoustic teacher.

The next problem is grouping or classification. I would suggest putting into the same class (1) those having as nearly as possible the same educational attainment or language ability, (2) those having as nearly as possible the same intelligence rating, and (3) those having as nearly as possible the same hearing ability. However, this last phase of the question does not present as difficult a situation as might be expected if you use the radioear because this instrument enables each child, by the adjustment of his own regulating dial, to receive only as much aid as he needs.

In acoustic education I would emphasize the supreme importance of the natural human voice in speech and in song, augmented by the use of musical instruments.

Electrical amplification of the voice and of music from instruments can be happily accomplished by the radioear. This is the only electrical instrument I know intimately though there are other devices on the market.

The results accomplished are the development of a hearing vocabulary, better speech and accelerated normal mental development which will reduce the cost of education by speeding up the process. And there is the possibility of the return of some of our pupils to the hearing public schools and to the hearing world.

Mrs. Rachel D. Davies, principal in the Western Pennsylvania school, supplemented Mr. Manning's remarks with a brief description of the use made with the radioear, stressing the desirability of keeping one class with the instrument all the school day and the development of a special teaching technique. Motion pictures to show the work of Miss Mason and Dr. Russell in the phonetics laboratory of Ohio State University were exhibited.

(Whereupon the convention adjourned until 9 a.m., Friday, June 26, 1931.)

BUSINESS MEETING OF THE CONFERENCE OF EXECUTIVES OF AMERICAN SCHOOLS FOR THE DEAF

A business meeting of the Conference of Executives of American Schools for the Deaf was held at the Manitoba Agricultural College, Winnipeg, Manitoba, Thursday evening, June 25, 1931, Superintendent J. W. Blattner, of Oklahoma, presiding.

Active members present were Ignatius Bjorlee, of Maryland; J. W. Blattner, of Oklahoma; A. J. Caldwell, of Louisiana; D. T. Cloud, of Illinois; Herbert E. Day, of Missouri; Burton W. Driggs, of North Dakota; Leonard M. Elstad, of New York; Thomas C. Forrester, of New York; E. McK. Goodwin, of North Carolina; Elbert A. Gruver, of Pennsylvania; Percival Hall, of the District of Columbia; Pearl Herdman, of Missouri; A. C. Manning, of Pennsylvania; Thomas S. McAloney, of Colorado; O. L. McIntire, of Iowa; O. M. Pittenger, of Indiana; Mrs. H. T. Poore, of Tennessee; Alvin E. Pope, of New Jersey; Mrs. Bess M. Riggs, of Arkansas; Thomas Rodwell, of Manitoba; Victor O. Skyberg, of Minnesota; Elwood A. Stevenson, of California; J. H. Stone, of Mississippi; E. S. Tillinghast, of South Dakota; F. R. Wheeler, of Connecticut.

Honorary members present were Sam B. Craig, of the District of Columbia; I. S. Fusfeld, of the District of Columbia; Glenn I. Harris, of Colorado; J. Schuyler Long, of Iowa.

A motion was adopted to increase the committee on organization by the addition of two members, whereupon Mr. Blattner appointed Mr. Cloud and Mrs. Riggs. Mr. Blattner also announced a previous appointment of Mr. Bjorlee to the place made vacant in the same committee by the death of Dr. W. L. Walker.

Dr. Hall, as chairman, read the report of the executive committee, which was adopted by vote of the Conference.

REPORT OF EXECUTIVE COMMITTEE

JUNE 24, 1931

By DR. PERCIVAL HALL, Chairman

The executive committee of the Conference of Executives of American Schools for the Deaf begs leave to submit the following report:

THE ANNALS

The official organ of the Conference, the American Annals of the Deaf, has been conducted under the able leadership of Prof. Irving S. Fusfeld, providing invaluable information as to our schools, particularly in the January number, reporting the proceedings of the Colorado meeting in full, and publishing its usual high type of papers on professional subjects, including matter of specific usefulness in classroom procedure and management. Due to the high expense of recording and printing the transactions of the Conference last fall, the assets of the Annals have decreased from \$5,120 to \$4,959, receipts excluding balance totaling \$3,369 and expenses \$3,578. Securities in bonds included in assets mentioned above remain the same as of July 1930, in amount totaling \$3,500 par value. The report of the certified accountant finds all statements of the treasurer correct.

The committee urges at this time that all heads of schools give their whole-hearted financial support to our official organ, remembering the plan by which each school assumes its share of the support of the Annals by an assessment at the rate of 25 cents per pupil, receiving in return one copy of the Annals for the year for each \$2 paid. The committee regrets to report that some schools have not thus contributed.

The question of nomenclature in the statistics of the Annals has been studied since the October meeting of the conference and progress is being made by the collection of opinions from various heads of schools and suggestions in this field are requested by the editor of the Annals.

INVITATION FOR NEXT MEETING

An invitation to meet at Trenton, N.J., in 1933 in conjunction with other organizations interested in the education of the deaf has been extended to the executive committee by Supt. Alvin E. Pope, who hopes to make the occasion one of international scope. This invitation will hold good for the conference whether or not other organizations accept. Your committee recommends that the invitation be accepted.

ELIGIBLE LIST FOR ACTIVE MEMBERSHIP IN THE CONFERENCE

In accordance with instructions and power to act given to the executive committee by vote of the conference in Colorado Springs the following list of schools has been determined upon, whose executive heads are eligible to active membership in the conference:

1. The executive heads of public residential schools named in the January Annals, 1931, pages 10 and 11, with the following exception: Deaf, Blind, and Orphans' Institute, Taft, Okla.—not a distinct unit for deaf children. Employs only two teachers altogether.

2. The executive heads of the following denominational and private schools in the United States:

- (a) St. Joseph's Home, Oakland, Calif.
- (b) Ephpheta School, Chicago, Ill.
- (c) Chinchuba Institute, Chinchuba, La.
- (d) Miss Reinhardt's School, Kensington, Md.
- (e) St. Francis Xavier's School, Baltimore, Md.
- (f) Evangelical Lutheran Institute, Detroit, Mich.
- (g) Central Institute, St. Louis, Mo.
- (h) St. Joseph's Institute, St. Louis, Mo.
- (i) Wright Oral School, New York City.
- (j) St. Rita School, Cincinnati, Ohio.
- (k) Archbishop Ryan Institute, Philadelphia, Pa.
- (l) De Paul Institute, Pittsburgh, Pa.
- (m) St. John's Institute, St. Francis, Wis.

3. The executive heads of all Canadian schools mentioned on page 32 of the January Annals except Toronto day classes, which are not organized as a separate school, and have only three teachers engaged.

4. The heads of public day schools listed on pages 20–22 in the January 1931 Annals, as follows:

- (a) Los Angeles Oral Day School, California.
- (b) Horace Mann School, Boston, Mass.
- (c) Detroit Day School, Michigan.
- (d) Gallaudet School, St. Louis, Mo.
- (e) Newark Day School, Newark, N.J.
- (f) Public School No. 47, Manhattan, New York City.
- (g) Cincinnati Oral School, Ohio.
- (h) Alexander Graham Bell Oral School, Cleveland, Ohio.
- (i) Hayne School, Philadelphia, Pa.
- (j) Paul Binner School, Milwaukee, Wis.
- (k) Parker Practice School, Chicago, Ill.

No public day school is included in this list which does not occupy a building of its own or is not organized as a separate educational unit for the deaf. Chicago day schools as a whole might be represented by a delegate chosen by the head of the department of special education from the principals of schools under his jurisdiction where deaf children are taught. Schools not large enough to demand the services of five or more teachers are not considered.

REPORTS FROM COMMITTEES

A report from the committee on the certification of teacher-training centers approving the course of normal training at Gallaudet College was presented by its chairman, Dr. T. S. McAloney, and accepted, which the executive committee recommends be made a part of the proceedings of the conference.

The committee on organization of the conference has reported a tentative act of incorporation and a constitution which it recommends for adoption at this meeting. The executive committee further recommends that the committee on organization be continued

and be authorized and directed to proceed at once with the incorporation of the conference and to prepare bylaws for consideration at the next meeting.

CERTIFICATION OF TEACHERS

The executive committee recommends that at this meeting of the conference the committee on the certification of teacher-training centers be authorized and directed to draw up a plan of certification of teachers after a study of the plan proposed by Dr. Long at the general session of the convention June 24, 1931, and to publish this plan in the September Annals. The executive committee, if so charged, will put the plan into operation.

REPORT FROM THE COMMITTEE ON THE CERTIFICATION OF TEACHER-TRAINING CENTERS

At the request of Dr. Percival Hall, the committee on the certification of teacher-training centers undertook a survey of the normal training course at Gallaudet College. The chairman of the committee appointed a subcommittee consisting of Mr. A. E. Pope and Mr. T. C. Forrester, the members living nearest to the college. This subcommittee visited the college during the period May 11 to 13, 1931, and the findings of this subcommittee have been approved by the committee, and are as follows:

1. The course of study as prepared by the college is up to date and very thorough and comprehensive. There are only two recommendations that we suggest in regard to the curriculum: (a) That if time permits, more subject matter should be introduced covering modern methods of supervision and administration—for the reason that most of the class expect to become eventually executives of schools for the deaf; (b) That the international alphabet of phonetics be introduced even if it mean curtailment of the time given to visible speech, because this system is used in all modern literature pertaining to phonetics and has been officially adopted by the national and international organizations interested in phonetics.

2. In order to find out whether or not the curriculum was carefully carried out, we accompanied the normal students in their daily routine from class to class during their observation and practice teaching periods.

In thus checking up the work of the teachers' training class we found that the conditions in Kendall School had been greatly improved in the last 2 years and consequently offered a much better opportunity to normal students for both observation and practice teaching than have heretofore been possible. We were greatly impressed with the improvement in speech and speech reading, auricular training and the presentation of other subjects.

3. Although we know many in the profession may object to the teaching of signs to the normal students, we feel that as these students may expect eventually to occupy executive positions in schools where signs are used outside the classroom, it would be necessary for them to have some knowledge of that means of communication, the better to understand and communicate with the adult deaf as well as with the deaf in school who are not fortunate enough to communicate by speech and lip reading or by manual spelling. Certainly knowledge of any method used in communicating with the deaf should prove an asset.

We wish to commend the college on the definite arrangements for the daily opportunity offered each normal student to observe methods of teaching and to plan a lesson and teach it under supervision and with criticism. Furthermore, the college should be commended for offering students practice teaching in high school subjects and also for giving normal students opportunity to carry on extensive and detailed study of one particular pupil; and again for giving them opportunity to do a limited amount of work with particular college students, thus bringing them into closer relationship with the adult deaf.

It should be noted that no students from the United States are now admitted to the normal training class without a college degree, and that those who complete the course satisfactorily receive the degree of master of arts.

Our investigation bears out the fact that the curriculum is adequately followed.

The committee recommends that the teachers' training course as conducted at Gallaudet College have the approval of the conference of executives of American Schools for the Deaf.

Respectfully submitted.

THOMAS S. MCALONEY, *Chairman.*

REPORT OF COMMITTEE ON ORGANIZATION

Mr. BJORLEE, chairman of the committee on organization, submitted a report in two parts. The first presented a tentative draft of an act of incorporation, and the second a constitution for the Conference of Executives of American Schools for the Deaf. Mr. BJORLEE also made the request that the committee be given further time to work out the bylaws.

OUTLINE OF PROPOSED ARTICLES OF INCORPORATION OF THE CONFERENCE OF EXECUTIVES OF AMERICAN SCHOOLS FOR THE DEAF

SECTION 1. Be it enacted that J. W. Blattner, of Sulphur, Okla.; Alvin E. Pope, of Trenton, N.J.; Elwood A. Stevenson, of Berkeley, Calif.; Percival Hall, of Washington, D.C.; Frank M. Driggs, of Ogden, Utah; Thomas S. McAloney, of Colorado Springs, Colo.; Herbert E. Day, of Fulton, Mo.; Madison J. Lee, of Danville, Ky.; Ignatius BJORLEE, of Frederick, Md.; Howard M. McManaway, of Staunton, Va.; Victor O. Skyberg, of Faribault, Minn.; Bess M. Riggs, of Little Rock, Ark.; and Daniel T. Cloud, of Jacksonville, Ill., officers, and members of the committee on reorganization of the Conference of Executives of American Schools for the Deaf, and their associates and successors be, and hereby are, incorporated and made a body politic and corporate in the District of Columbia, by the name of the Conference of Executives of American Schools for the Deaf, to promote the management and operation of schools for the deaf along the broadest and most efficient lines and to further and promote the welfare of the deaf, and by that name it may sue and be sued, plead and be impleaded, in any court of law or equity, and may have and use a common seal and change the same at pleasure.

Sec. 2. That the said corporation shall have the power to take and hold personal estate and such real estate as shall be necessary and proper for the promotion of the educational and benevolent purposes of said corporation.

Sec. 3. That the said corporation shall have a constitution and bylaws and shall have the power to amend the same at pleasure, provided that such constitution and bylaws do not conflict with the laws of the United States or of any State or of this act of incorporation.

Sec. 4. That said corporation may hold its meeting in such places as said incorporators and their associates or successors shall determine.

Upon formal motion, the report of the committee on organization was approved as far as the proposed act of incorporation was concerned, and the committee directed to proceed with the incorporation on the lines suggested by the tentative draft as presented above.

Mr. BJORLEE continued with his report:

CONSTITUTION FOR THE CONFERENCE OF EXECUTIVES OF AMERICAN SCHOOLS FOR THE DEAF

ARTICLE 1—NAME

This organization shall be known as the "Conference of Executives of American Schools for the Deaf."

ARTICLE 2—OBJECT

The object of this organization shall be to promote the management and operation of schools for the deaf along the broadest and most efficient lines and to further and promote the general welfare of the deaf.

ARTICLE 3—MEMBERS

SECTION 1. Active membership in this organization shall be limited to executive heads of schools for the deaf.

Sec. 2. Associate membership, carrying only the right to participate in the deliberations of the organization but not the right to vote, may be granted to principals of schools on recommendation of the executive head of such schools.

Sec. 3. Honorary membership may be conferred at any meeting of the organization by vote of the active members present, such membership to continue for the duration of the meeting but not carrying the right to vote or to participate in the deliberations except by invitation.

Sec. 4. In order to qualify for active membership in this organization executive heads of schools for the deaf shall pay into the treasury of the organization a triennial fee of \$5.

ARTICLE 4—OFFICERS

SECTION 1. The officers of the conference shall be a president, a vice president, a secretary, and a treasurer, and six other active members of the conference. These six members together with the president ex-officio shall constitute the executive committee.

Sec. 2. At the first general meeting of the conference after the adoption of this constitution there shall be elected by ballot a president, a vice president, a secretary, and one additional member to the incumbent executive committee. The term of each of these six members shall be 9 years, except as provided in section 3.

Sec. 3. At the second general meeting the membership of the conference shall by ballot determine which of the members of the then existing executive committee shall serve for the next 9, 6, and 3 years, respectively. Thereafter two members of the executive committee shall be elected triennially to fill vacancies.

ARTICLE 5—DUTIES OF OFFICERS AND EXECUTIVE COMMITTEE

SECTION 1. The duties of the officers shall be such as are generally imposed by similar organizations, except as herein specifically provided.

Sec. 2. The executive committee shall be charged with the management of the official organ of the conference, known as the American Annals of the Deaf, and shall appoint its editor, who shall be also ex officio treasurer of the conference.

Sec. 3. The general management of the affairs of the organization between meetings shall be in the hands of the standing executive committee, which shall elect its own chairman and other officers. The executive committee shall fill such vacancies among the officers and the members of the executive committee as may occur between regular sessions of the conference, such appointees to serve until the next meeting of the conference. The executive committee shall be governed by the provision of such bylaws as may be adopted by the conference.

Sec. 4. The standing executive committee shall make a report at each meeting of the operation of the organization, including the receipt and disbursement of funds since the preceding meeting.

Sec. 5. All officers must be active members of the conference.

ARTICLE 6—MEETINGS

SECTION 1. Regular meetings of the conference shall be held triennially on call by the executive committee. Special meetings, when considered necessary, may also be called at the discretion of the standing executive committee. The date, place, and programs of all meetings shall be determined by the standing executive committee.

Sec. 2. Notices of all meetings of the conference shall be given through the official organ of the conference.

Sec. 3. No business of the conference shall be transacted at any meeting that does not have at least 25 active members present, this number constituting a quorum.

ARTICLE 7—AMENDMENTS

SECTION 1. This constitution may be amended by the affirmative vote of at least three fourths of the active members present at any regularly called meeting, at which at least 40 active members are present, provided 6 months' notice of meeting with publication of proposed amendment shall appear in the official organ of the conference.

ARTICLE 8—BEQUESTS

Devises and bequests may be worded as follows: "I give, devise, and bequeath to the Conference of Executives of American Schools for the Deaf, for the promotion of the cause of the education and welfare of the deaf, in such manner as the standing executive committee thereof may direct", etc.; and if there be any conditions, add "subject only to the following conditions, to wit:-"

It was moved and seconded that the constitution as given above be adopted. The motion was carried.

Dr. McAloney, chairman of the committee on certification, reported that his committee was engaged in deliberation on a plan for certification of teachers and that it expected to have it ready for publication in the September number of the Annals.

A motion was adopted authorizing the committee on certification to proceed with the plan of certification, have it published in the September number of the Annals, and put it in operation when completed.

With the purpose of holding an international congress of educators of the deaf at Trenton in the summer of 1933, Mr. Pope on behalf of the authorities of the New Jersey school formally invited the conference to hold its next regular meeting at that time, in conjunction with the other organizations of educators of the deaf, to which occasion also, representatives from foreign countries would be invited. It is likely that foreign participation could be secured since the Chicago Exposition will be in progress the same year. Mr. Pope suggested that the keynote for a meeting of this kind could be found in the need for research work on problems in the education of the deaf and would thus possibly assist the national research council in carrying out its plans in the same field. It was Mr. Pope's hope also to secure the cooperation of the Federal Government in promoting the international character of the meeting by officially inviting foreign governments to send representatives, if the activities of the congress could be made to include an educational exhibit and a visit to the Exposition at Chicago. The last week in July or the first week in August was suggested as a favorable time for the meeting. The conference of executives of American schools for the deaf could have a day for its section and for business purposes, while the general program could be arranged by a committee representing each of the participating organizations. If for any reason the plans for the international congress fall through, the invitation for the conference of executives to meet at Trenton will hold, but the meeting might then have to be at a different date in the same year.

A motion that the conference accept the kind invitation of Mr. Pope to meet at Trenton in 1933 was carried.

(Whereupon the conference adjourned.)

FIFTH DAY, FRIDAY, JUNE 26, 1931**PROGRAM****9 a.m. to 12 m.:**

- General session, Dr. E. A. Gruver, presiding.
Paper, "The Preparation of Students for Entering Gallaudet College", Dr. Percival Hall, Gallaudet College.
Address: "Life's Higher Values", Rev. J. S. Bonnell, Winnipeg, Manitoba.
Paper, "Chapel Exercises in Schools for the Deaf", Charles D. Seaton, West Virginia School; discussion.
Address and motion pictures, "The Work of the Phonetics Laboratory at Ohio State University", Miss Marie K. Mason, Columbus, Ohio.
Business meeting of the convention.
Adjournment.

MORNING SESSION

The convention called to order in general session at 9 a.m., Dr. E. A. Gruver presiding.

Dr. GRUVER. We begin this morning with a paper by Dr. Hall on the subject of the preparation of students for entrance to Gallaudet College.

THE PREPARATION OF STUDENTS FOR ENTERING GALLAUDET COLLEGE

By Dr. PERCIVAL HALL, president of Gallaudet College, Washington, D.C.

In considering the question of the preparation of students for Gallaudet College, it is not my intention to take up in detail the steps necessary in studying the various subjects now required for admission to our preparatory or freshman classes. I think it is well known to you all that out of the eight subjects required for admission to our preparatory class, namely, algebra, arithmetic, English history, United States history, physics, composition, grammar, and reading, all schools on our approved list are allowed to send us certificates of satisfactory work done in United States history, English history, and physics instead of taking the full set of examinations. Schools at present on the approved list are those which have sent us a considerable number of students who have done good work after admission. The list is printed in our catalog and is still open for further additions.

I believe also that it is generally known that the examinations may be divided in any way between 2 years.

It is rather my intention in this paper to speak of certain general deficiencies that seem evident in the preparation of students who come to us, and certain other preparations which should be made besides the actual instruction in book knowledge required for passing entrance examinations.

In the first place, I would like to say something about financial preparation. It is quite true that the laws of the United States allow us to give free scholarships to indigent students, and that these scholarships cover board, laundry, tuition, and ordinary medical attention. It is also true that for those parents who cannot afford the very reasonable fee of \$600 per year, covering the same privileges as the scholarships, the board of directors of our institution may reduce the full fee in proportion to the means of the parent.

There still remain, however, expenses for books, clothing, carfare and incidentals, which even with great economy and leaving out cost of carfare call for the expenditure of from \$150 to \$200 per year. The question of finances should be carefully considered by every prospective student, and by every head of the school from which the student is coming. Many States are making provision for carfare or other assistance, varying from \$100 to \$200 per year. I am very glad that this has been done in so many States, as it has no doubt resulted in the encouragement of worthy boys and girls to come to college. In the last few years considerable has been done for our students by the State rehabilitation bureaus. Virginia, South Dakota, Wyoming, and Montana have given assistance for the purchase of books and for aid in the payment of traveling expenses through the bureau of rehabilitation of the State in question. The department of education of the State of Pennsylvania has funds with which it is aiding a number of our students in meeting such expenses as those for stationery, books, student fees, etc.

The days have passed when special rates could be obtained for individuals from the railroads, and the expense of travel is often one of the largest items which the student must meet. I wish to urge again, as I have done on previous occasions, that every school which does not now offer aid to prospective students of Gallaudet arrange for the provision of State funds to be given through the school, or though the department of rehabilitation, which will enable worthy students to meet the necessary miscellaneous expenses while at college.

It is impossible for us to furnish work for many students during the college year. The total earnings of our students from all sources during this time is probably less than \$2,000, averaging simply pocket money for small expenses. Many of our young men and a few of our young women, it is true, are able to earn during the summer enough to meet a considerable part of their expenditures for the rest of the year. I would advise, however, that no candidate come to Gallaudet without financial backing to the extent of carfare both ways, and with the addition of at least \$150, \$50 of which should be available at the opening of the college year.

In the second place, let me call attention to the need for physical preparation. We have been pleased to find that in general the physical condition of most of our students when they arrive in Washington is good. There are still certain lines, however, in which I believe advancement should be made. It is perfectly possible now to inoculate young people against typhoid, diphtheria, and smallpox. It is also probably possible successfully to inoculate against other common diseases such as scarlet fever. Our study so far has convinced us that all students entering college should be protected against the three diseases first mentioned, namely, typhoid, diphtheria, and smallpox, and we urge that this be attended to during the years of preparation for admission to college. To do this shortly after the arrival of students at Gallaudet, in a new atmosphere, with new studies to be taken up, and with the demands of various athletic and other organizations, puts a heavy burden of discomfort and expense of time and money upon us and upon the new incoming students.

There are also from time to time a good many students admitted to our institution whose ears, eyes, teeth, or tonsils are badly in need of attention. If such matters are looked after when the boys and girls are considerably younger, bad tonsils removed, proper dental attention given, and the condition of eyes and ears checked up and brought to the best possible state, many hours or even days of loss of college work, because of poor physical condition of our students, would be avoided. May I also urge that our boys be discouraged from smoking.

I believe that the attention given in our schools to sports, gynastic drill, and so forth, is such that it is not necessary to urge more time or more attention to this side of the physical preparation. I do wish, however, to stress the fact that our incoming classes as a whole are deficient in their knowledge of general hygiene, as is clearly shown by tests conducted for the past 3 years with our lower classes at Gallaudet.

In concluding the consideration of the physical side of preparation I would urge, therefore, first, more prophylactic measures for the prevention of diseases; second, a greater attention to the condition of teeth, eyes, ears, and tonsils; and, third, more instruction in hygiene, to the end that as sound a body as possible shall be ready for the severe strain which comes with college education.

As to what might be called preparation for college on the spiritual side, or the side of character, it is difficult to write. Most of our young men and women come to us after their characters are fairly well formed. It is important that the early formation of habits of correct living, clean thinking, and the maintenance of high ideals be kept in mind in sending to Gallaudet young men and women who must be away from home influences for months at a time. We require definite physical examinations now of our candidates and we are supposed to require from the heads of various schools definite statements as to the character of the boys and girls admitted to Gallaudet College. Perhaps this side of our requirements has been left rather indefinite. We have trusted to the heads of schools not to recommend for admission those whose character is weak or whose ideas of right and wrong are twisted.

We still persist at Gallaudet in the holding of devotional exercises in our chapel, in having Sunday meetings of all our students for the consideration of ethical problems, and in trying to emphasize in our dealings with our young people the value of honesty, integrity, and high ideals. The foundation for a strong character and the understanding of moral obligations must be laid from the time the child enters the school. While general example is a great teacher, I shall personally be sorry to see the disappearance, from our boarding schools particularly, of all general chapel exercises and any lessening of moral and ethical training through specific lessons. We hope that young people who must be put largely on their own initiative in college far away from home will come to us with good preparation to withstand temptations in the new life which they must enter.

As to preparation in actual studies for admission to Gallaudet College, it is still evident that there is a lack in certain definite lines when the average student is considered. I have already spoken of the weakness in the teaching of hygiene which has been proved

by definite tests given over a period of years at Gallaudet. These same tests, both in mathematics and in English, have shown a lack of ability in reasoning which is much to be deplored. Not only must words be understood as units, but the meaning of paragraphs as a whole must be clear. Students at college must be able to consult texts and reference books, understand articles as a whole, and reach general conclusions in English and in mathematics and in all other studies without the continual aid of the teacher. Paragraph meaning tests and mathematical calculation tests have shown this weakness very definitely, as was made clear in a paper given by me at the last meeting of the convention, at Faribault.

Since our meeting at Faribault we have continued the tests of our lower-class students, and I am going to ask your indulgence for a few minutes in order to show you our later results along these lines, in graphic form, and to compare them with results we first obtained: [At this point Dr. Hall illustrated his remarks with a number of charts showing the results of standardized tests given to the students of the freshman and preparatory classes of Gallaudet College.]

These graphs not only show the weak spots in the preparation of our students but also show one of the great difficulties of our college work. For the past few years students admitted have varied from an educational standard of around the seventh grade up to an educational standard beyond the freshman class of the average college for the hearing. It may be that our entrance examinations are too easy, but this study shows that they are on the whole good tests. It may be that some teachers are skillful in preparing students to pass entrance examinations who have not really the general ability to do college work. Tightening up in the last 2 years in the minimum standard of marks which will be accepted for students not able to pass all the examinations has, in my opinion, helped to raise the average educational attainment of our preparatory students by a full year. We hope also there has been better teaching. If we could raise it still another year by more thorough preparation of these pupils in school through advancement in understanding of arithmetic problems, through better understanding of language problems, and in general through better training of the reasoning power, and further by more training along the line of hygiene, a straightening out of the graphs which I have shown you would occur, and in my opinion, the difficulty of doing justice to our preparatory students after they enter would be greatly reduced. There is shown in our tests as much as 6 years' difference in educational attainment among the members of the preparatory class. It is evident that in spite of the division of this class into several groups our teachers have a serious problem in hand under such circumstances. A check up of candidates for Gallaudet College by the heads of our schools, or educational departments of schools, through standard educational tests during the last 2 years of preparation, would be of great value in recommending what candidates should take our entrance examinations. Those who stand too low educationally should be held in school or not encouraged to come at all, depending upon their records of progress.

We still aim at Gallaudet College, as we are thoroughly convinced we should, at quality rather than quantity of students trained. Such

cooperation by the schools with the college as the preliminary testing of candidates and the raising of educational standards in certain lines will enable us in a short time, we hope, to say that our preparatory class work is really the finishing of the high-school education, and that our 4 years of college classes will unquestionably give a real college education to the young men and young women who remain for graduation.

(The convention was addressed by Rev. J. S. Bonnell, of Winnipeg, Manitoba, who gave an inspiring talk on Life's Higher Values.)

Dr. GRUVER. We now have a paper by Mr. Seaton, of the West Virginia School, on Chapel Exercises in Our Schools.

CHAPEL EXERCISES

By MR. CHARLES D. SEATON, of the West Virginia School, Romney, W.Va.

It is very seldom that we pay attention to criticisms unless they come from sources which seem reliable and form an important part of our work and reach such proportions as to demand serious consideration on our part. Whenever an attempt is made to break away from old ruts or to introduce a new fad or theory, it is nearly always sure to meet with disfavor or a storm of protest at first. For the past few years schools have been quietly lessening or abolishing chapel exercises and giving more attention to religion in the school-rooms—making the lessons more understandable and simpler for the lower grades—for good and sufficient reasons, chief of which are: First, a large percentage of the children derive no benefit from the chapel exercises; second, too much time is consumed and wasted in going to and from the assembly room, which can be better utilized in schoolroom work; third, the teaching staff of several schools is entirely composed of women who fight shy of speaking publicly on the platform; fourth, the fear of denominational doctrine is noted in some quarters; and other reasons, which we fear are too personal to mention.

It will be noted that the education of the deaf in the United States was started and carried on by men and women who were known for their religious zeal and piety, and it is hard and also embarrassing at times to disregard old customs and to adopt new and changing conditions in order to keep up with the times and the public demand after a fair trial and due consideration have been given to new ideas and theories.

The publication of an article on "Chapel Services Discontinued", last winter in the Silent Missionary of Baltimore, Md., brought to light the fact that outsiders had been watching and studying the effect and result of the discontinuance of Bible reading and moral instructions in both public schools for hearing children and schools for the deaf. The subject was discussed in the L.P.F. and proved quite interesting.

A certain preacher stated that he felt that the discontinuance of chapel services had resulted in a moral letdown among the younger element, and that it was more marked among deaf children because they were away from home 9 months in the year, whereas the hearing children live at home, are under parental influence right along, and have opportunity to go to church and Sunday school; this is indeed a materialistic age; you would be surprised to note how much the young deaf man or woman does not know about religion of any kind. He also added: "Perhaps this goes for many of the younger teachers who know little, and care less, about religion."

The article was penned by the Reverend Homer Grace, Episcopal missionary from Colorado. He deplores the tendency of our schools to abolish religious training and chapel services. Before reproducing the article in full, be prepared to let no alarmist persuade you that the children of today are any worse than the children have ever been. There have always been unruly, mischievous children; there will always be. But the average child or youth of today is as God-revering or God-fearing as were his parents or his parents' parents. The main difference is that today things occur after a more open fashion. The article, as it was written by Mr. Grace and printed in the Silent Missionary, is as follows:

CHAPEL SERVICES DISCONTINUED

Train up a child in the way he should go; and when he is old, he will not depart from it.—Proverbs 22:6.

There is a persistent trend in the schools for the deaf to abolish chapel services.

The older generations of graduates recall the important part these services played in molding their thought and conduct and naturally they view this departure with much concern.

One reason given for this trend is that the schools were established for cultural and not religious and moral education. This plea cannot but be viewed as one-sided, if not false. Culture without the finer attributes is a poor kind of culture to say the least.

Another reason given is that we should imitate the public schools. Pupils of the public schools come under the influence of the home, the Sunday schools, and the church outside of public-school sessions, while children of our State schools for the deaf enjoy no such contacts. The comparison is obviously a poor one.

The officers and teachers of our schools take over the duties of parents, guardians, and spiritual and moral guides 9 or more months in the year. By abolishing chapel services and religious instruction they shirk duties which obviously they are called upon to perform. We wonder if this means a godless generation of deaf children in the years to come. If so, God pity these children, their teachers, and their schools.

Another source, but not so public. We have first-hand knowledge of instances where ministers of the Gospel have in some quarters questioned the fitness and propriety of teachers to occupy the platforms of schools without being ordained as the preachers are. Why such an unfair opinion or, rather, criticism? Teachers as a rule are persons above the average in character and intelligence. They are among the leaders in church and Sunday-school activities, and what would our churches be without them? To sum this up in a nutshell, the character of pupils is what the superintendents and teachers of schools make of their pupils or charges.

Some of the facts anent chapel exercises as viewed by outsiders have been concisely stated and presented to you without expressing any personal opinions or indulging in personalities. It is now up to you to do with this matter in whatever way you see fit. Rather do a little now than nothing at all in order to be prepared for bigger and worse problems which may arise for future conventions to tackle. It is certainly the privilege of schools as individuals to conduct their own religious affairs as they see fit without outside interference, and they will continue to exercise this privilege as long as conditions and circumstances allow.

Dr. PITTENGER. We believe that the attitude of worship and the habit of attending church are worth while. Many hearing people go to church and don't get very much out of the sermon, but if they are in the habit of worship and reverence and set apart an hour for that, it is good for anyone.

Mr. FORRESTER. I would like to ask the superintendents here if they take the trouble to teach the Lord's Prayer to the deaf step by step. Some institutions and schools have the Lord's Prayer every day, and some of them sign it, some of them speak it. I wonder how many take the trouble to go through each petition. I think that should be done once during the year, at least. What does it mean to a deaf boy, or a hearing boy, to say "Thy kingdom come"? How many deaf people know what that means? "Thy kingdom come." It is the kingdom of love, righteousness, and peace. There is no sense in having the children go through the prayer if it does not mean anything to them.

Dr. GRUVER. I would say that in our intermediate course the Lord's Prayer is taught sentence by sentence, interpreting its meaning, simplifying, if necessary, and modifying or changing it so that the child may follow and understand it.

A MEMBER. Are not the attitudes of the Protestant Church and the Catholic Church quite different on this question? Has anyone any information on that?

Mr. SENSENIG. We have in our school Protestants, Catholics, and Jews, and we do not wish to offend any of them, as they are all our friends. We do not have service in the chapel every morning, but the teachers conduct services in their respective classrooms. In these services the children repeat the Lord's Prayer and pledge allegiance to the flag (as is required in our State). The children take turns in leading in these exercises. The teacher may give a short talk on morals as opportunity offers. This is optional with the teacher.

We conduct chapel services each Sunday, and it may interest some of you to know how we proceed in the oral way. We have large blackboard space back of the platform, from which the speaker makes his address. About an hour before the service the person who is scheduled to conduct the exercises writes an analysis of what he is going to say on this board. It helps deaf persons very greatly to read speech when they know exactly what you are talking about. I would not be in favor of a person getting up before an audience of children of many grades of mental ability and of speech-reading ability without giving some inkling of what the person is going to talk about. Under those conditions the oral address would not be well understood. We have a chapel book and follow an order of exercises. The selected order is posted where it is plainly seen by those assembled. The pupils recite in concert with their leader such scriptural readings and hymns as are scheduled and then comes the address. On the following Monday the teacher of language may ask, "What did Mr. So-and-So talk about in the chapel yesterday? Write a paragraph about it." Most of the children will do better than you would if you were asked what the preacher said on the previous Sunday when you were in church.

The boys and girls do not appear in the chapel at the same time. This is not because we desire to segregate the sexes but because the smaller group can be arranged closer about the speaker's platform. If the service for the boys is held in the forenoon, that of the girls is held in the afternoon, the one group having a reading period while the other group is in chapel. With light reflected on the face of the speaker and the pupils sitting within close range, the pupils know what we are talking about. Every school has poor speech readers and pupils of varying mentality, but all can get the gist of what is being said from the analysis on the board, to which reference is made by the speaker throughout his discourse. We think the chapel service is a great help, and that the sign language is not necessary.

Mr. BJORLEE. As superintendent of a combined school, I feel that in conducting our chapel exercises the use of the sign language is justified. I would like to ask all those present how large the voluntary church attendance would be and how much those present would enter into the spirit of the service, if you were to eliminate the personality or the oratorical ability on the part of the pastor. Would you go to church every Sunday to find a message written on the slate, or read off to you in a half intelligible manner? Remember our deaf children are forced to go to chapel and, as they know the teacher is to quiz them on the following day, it becomes just another lesson unless given in the clearest and most forceful manner possible.

There is absolutely no question but that the deaf, both children and adults, enjoy their chapel exercises a great deal more when these exercises are conducted in the sign language by one thoroughly versed in the use of signs. Our deaf clergymen exert exactly the same appeal with their audiences as do hearing clergymen when at their best.

I believe it is universally conceded that the older children in all of our residential schools know the sign language. If the thought uppermost in our minds during the chapel hour is to teach a moral lesson, I am certainly in favor of giving that lesson in the most effective manner possible.

I believe it is the discontinuance of the sign language in our school work which has brought about the greatest decline in chapel exercises, for it must be admitted that the pure oral method fails where it is desirable to communicate a lengthy and often complicated message to a large group of persons at one time.

A. C. MANNING. I am afraid the speakers are missing the mark in the turn they have taken in the discussion of this subject. They are discussing methods in conducting chapel services. The subject under discussion is Chapel Exercises, whether or not we shall have them. The question is, Shall we have chapel exercises or shall they be abandoned? By all means let us have chapel exercises, either manually or orally. They can be done either way successfully, manually or orally. I have conducted chapel exercises orally with very happy results, and I have conducted them manually with equal success. It does not matter in this discussion whether it is done this way or that. The point is to recognize the very great worth of this form of religious instruction, which in this demoralized age is so urgently needed. If entered into in a reverent spirit, the possibilities are vast; and their value should not be minimized at this critical time in the lives of our young people, when the danger is so great that they will become indifferent to the things that are high and holy.

Excellent results can be secured by conducting short religious exercises in the classroom during the week.

Certainly I believe on Sunday we should get our children together in groups, modifying the message according to the intellectual ability and literary advancement of the group. And I know that if it is done in the proper attitude, you will get results which will not only tell intellectually, but will tell also in the spiritual life of your pupils. Let us not abandon chapel exercises.

Mr. STEVENSON. My feeling is this: That no matter how well conducted your boy or girl may be, if you have not developed the spiritual side he is nothing but an empty shell. I would do anything to build up that spiritual side of a deaf person, because in the end that is what he will have to depend upon for his mainstay in life.

Mr. TRAVIS. I agree that you can put it over both orally and manually. You can do it both ways. But the question that is being discussed here is what you are going to do, it seems to me. I get the reaction from it as the editor of our paper. Our children write what they call "our news" and we make a specialty of publishing in the paper what they have to say, and I notice this, that there is more reaction among the pupils orally than manually. We have some

pupils there who can talk and do talk, but don't sign, but the reaction from them to the chapel exercises is always greater and fuller and shows better understanding of what is said. I believe deaf children at home get just as much training from their Sunday school as hearing children get from their Sunday school, and I know that the deaf children at the Indiana school get more moral and religious training from their chapel exercises than the average hearing child receives at home. I think that the deaf child does not suffer in his moral and religious training, compared with his hearing brother who is at home running the streets.

Mrs. PITTINGER. I wish to say that our exercises that are conducted by the women are almost perfectly conducted. I think we all learn most of our lessons from mother and I believe that any system of chapel exercise that does not take in the heart of woman is all wrong.

Mr. H. B. FETTERLY, of Ontario. I am not in on the controversy between the oral and the manual. I don't know anything about it; don't want to know. I think the quicker we get rid of that kind of thing the better. What we want is unity. Now, in the Ontario school we have our Protestant clergyman and Roman Catholic priest to conduct chapel services on Friday. On Sunday morning the children assemble with their different teachers, Roman Catholics with Roman Catholic teachers and Protestants with Protestant teachers, and they have their Sunday school lessons and they go into them very thoroughly. They use the regular international series of lessons. They know those lessons, because I have often questioned them on them afterward. Then after the lesson we get them all ready and we send them down to the city churches. Now, I think, from what I have seen in the education of the deaf, that one place where the schools have fallen down is in getting our children out and giving them social contact with the outside world. That is one of the things that in the past year I have endeavored to do and our children do get out and the people in the different churches in the city are interested in them. They not only get instruction on Sunday at the city churches, but they are invited out during the week and they have social contact with young people of the different churches. I think the more along that line we can give to our deaf children, the more they will learn and the better they will be able to manage for themselves when they go out of school, both religiously and every other way.

Mr. GEORGE BATEMAN, of Nova Scotia. I come from Halifax. Perhaps you don't know very much of our school, but I do feel that every school on the continent can learn something from the way we conduct our social and religious exercises, thanks to the goodness of the first principal of the school, who was a very ardent Presbyterian from Scotland, and I am glad to say we have tried to keep the same spirit in the school.

Every morning we go into the chapel at 9 o'clock. All the Protestants go together, about 90, and there are about 40 Roman Catholics who go into another room. In the Protestant section every child receives a Bible and we read a chapter, or half chapter, from one of the books. We just finished before I came here the Book of Ecclesiastes, and I can assure you there is great room for thought in that

book. After that we all repeat the Lord's Prayer. Those who cannot speak it spell it, and it is surprising how the little ones get to understand the teachings of the Lord's Prayer even from looking at lips. Then the principal spells a prayer and we all march out and go into the classrooms for 20 minutes of religious instruction every morning except Saturday and Sunday. That just shows you the stress we put upon spiritual training of our children. In the evening from 7 to a quarter past there is a teacher who conducts chapel exercises, and a great many of them take a Biblical story for their subject.

On Sunday we have prayers in the morning, the same as on every other day, and the children all go to church. The Roman Catholics go in a body. The Protestants go in a body to the Church of England service. I suppose they started going to the Church of England service because they have a set form of service which the children can follow.

Miss FORD. This is in reference to something that was said about children feeling that everything that was written on a slate in chapel was forcing religion on them. It reminds me of a Scotch play which was on the stage some years ago, *Bunty Pulls the Strings*. The scene opens with the stern father telling a boy to learn the catechism. The boy says, "I don't understand it." He says, "Never mind understanding it; learn it." Well, I learned the shorter catechism in that way and I don't think it does the children any harm to be forced to take religious training.

Dr. GRUVER. We have had a very profitable discussion, but the time is getting on. Miss Mason yesterday in the other building exhibited her motion-picture films on lip reading. Upon request of a number of members of the convention, she is going to repeat it to us now, first explaining the nature of her work.

Miss MASON. It is a great pleasure to present my work here to you this morning. As you realize, it was not originally intended to appear on the program, and therefore I have not made a formal preparation for the work that I am going to show you this morning, but in a most informal way I am very happy to give you a brief outline of it.

Briefly, it is a method of teaching speech reading to the deaf by means of motion-picture photography. It had its inception in the fertile mind of Dr. Oscar G. Russell, of Ohio State University, but Dr. Russell was not familiar with the method of teaching speech reading and I was invited to come in and do the work. It is a laboratory method of procedure and the work is done in the laboratory by the students. The lesson plan, briefly, is this: It is three-fold. The lesson proper, which takes the place of the ordinary text, only no attempt is made at any formal instruction. We use the introductory method altogether. In the second part of the lesson the student is required to reproduce what he has learned from the first part. He receives no help; it is his own work. The third part is a questionnaire on the lesson, in which the pupil must give back to the teacher what he has discovered. He must find it out for himself, and that has advantages which I will point out later.

This work has been carried on during the past year at Ohio State University, where it has been tried out with university students.

A speech and hearing survey was made of all the incoming freshmen, and out of 1,500 freshmen, or more, we found that over 600 had hearing complexes ranging from very slight ones to more serious ones. Many of those students are now registered in my class in the university. Lecture work is given on phonetics. We are not permitted to teach speech reading as such in the university, because no remedial work is permitted.

So far we have been able to come to the following conclusions: Students who cannot hear such sounds as "s" and "sh" are, however, able to form words containing such sounds with perfect naturalness. Second, it does away with the tendency to exaggeration in speech and there is no confusion or embarrassment experienced in a class where others are able to read much better than the particular student in question. It provides repetition and drill which we cannot give in our regular classes and it gives a certain confidence to the student which is lacking in other speech-reading methods. It provides for using various speakers, because any number of speakers can be included. But perhaps the greatest benefit may be seen in the fact that there can be no mistake in what we actually see in visual speech. We know that speech changes in the mouths of various people and we prove that, and it makes for accuracy of speech reading.

I believe that is a brief idea of the work and I shall be very glad, after I have given you the films, to answer any questions, if I have not made it clear. I have with me one or two films, as I expected to do some visiting after the convention and I happened to bring these with me. They are not the films that I would like to have presented to the convention, but they will give you some idea of the work. They happen to be, two of them, final examinations that I have already tested out with my students. I am sorry that I have no films with me that show the actual working out of the method.

(Owing to light conditions, the demonstration was given in another room.)

BUSINESS SESSION

The business session of the convention opened with the reading of reports from committees.

Miss Ford, for the committee on resolutions, read the following report:

Whereas the members of this convention have been so cordially received and have had so much done for their care, comfort, and good-fellowship during their stay in Winnipeg, entailing great forethought, preparation, and work, all of which service has been so untiringly and unstintingly given: Therefore be it

Resolved, That we tender our warmest thanks and appreciation to Superintendent and Mrs. Thomas Rodwell, and to all the teachers, officers, and employees of the Manitoba School; and be it further

Resolved, That we manifest this appreciation by a rising vote of thanks.

Resolved, That we tender our thanks to His Grace the Archbishop Matheson for his presence and the divine service which he rendered, and further that we express our deep appreciation to the Province of Manitoba and in particular to the Honorable R. A. Hoey, Minister of Education, and to Dr. Robert Fletcher, Deputy Minister, for making it possible to have the convention in Winnipeg, and for their warm, personal interest in its success, and further that we owe a special debt of gratitude to Dean McKilligan and his staff for having made such splendid provision for our requirements and for their solicitude for our

comfort during our stay in Winnipeg, and further that we thank Mayor Webb for his presence at our gathering, his cordial welcome and cooperation, and that we thank the press of Winnipeg for the publicity that has been given to our meetings.

Resolved, That we are especially indebted to a number of outside speakers for instructive and inspirational addresses. We feel that grateful expression should be extended to Dr. W. A. McIntyre, principal of the normal school at Winnipeg; to Dr. H. W. Wright, of the University of Manitoba; to Dr. G. Oscar Russell, of the University of Ohio; to Miss Agnes Hammell, supervisor of arts in the Winnipeg public schools; and to the Rev. J. S. Bonnell, of Winnipeg.

Resolved, That the convention express its thanks to the Rotary, Kiwanis, and Cosmopolitan Clubs, of Winnipeg, for making it possible for its members to view the natural beauty, unusually fine city planning, and magnificent architecture of this splendid pioneer city of western Canada.

Resolved, That the convention express to its own officers its grateful appreciation for their untiring efforts in arranging and so ably carrying to success the program of this, the twenty-seventh meeting of the Convention of American Instructors of the Deaf.

Resolved, That the convention extend its thanks to Superintendent Burton W. Driggs, the faculty, and the pupils of the North Dakota school for the presentation of a most delightful pageant, which was of great educational value as well as a source of entertainment. The convention fully appreciates the great amount of time, effort, and training necessary in the preparation of such an elaborate and pleasing program. This body is aware that it required talented teachers, encouraged by their efficient superintendent, to develop such skill in their pupils.

Resolved, That a vote of thanks be extended to the pupils of the Winnipeg and Minnesota schools who have so capably participated in demonstrations of classroom work.

Resolved, That the hearty thanks of the convention be tendered to the schools whose exhibits have formed one of the most satisfying features of this meeting, also to Mr. P. N. Peterson and all those whose services were given in bringing about the excellent arrangement of this most attractive and educative display of craftsmanship.

Resolved, That the convention express its appreciation of the services of the interpreters whose continued and untiring efforts have contributed so materially to the success and value of this meeting.

Whereas the certification of teachers is an influence toward the uplift of the entire profession; and

Whereas the Conference of Executives of American Schools for the Deaf is recognized as the official organization which should approve such certification: Therefore be it

Resolved, That we express sincere hope that speedy action may be taken by the conference toward arranging for such certification.

Each of the above resolutions was proposed, seconded, put, and carried.

Mr. BJORLEE, secretary of the convention, announced that the committee on necrology was not ready to report and that it requested time to prepare the material of its report for inclusion as addenda to the proceedings.

Mr. Blattner, for the auditing committee, reported that the accounts of the treasurer of the convention had been examined and found correct.

Dr. Pittenger, for the committee on nominations, submitted the following report, which was approved by the convention:

STANDING COMMITTEES

Art section.—Mrs. Patrick J. Kelly, of Missouri, chairman; Hazel T. Craig, of the District of Columbia; Geneva B. Llewelyn, of Wisconsin; Gertrude A. Warner, of Manitoba.

Kindergarten section.—Margaret C. Smith, of Colorado, chairman; Margaret Scyster, of Illinois; E. Frances Hancock, of New York; Josephine F. Quinn, of Minnesota; Catherine Ford, of Ontario.

Normal section.—E. A. Stevenson, of California, chairman; Mrs. H. T. Poore, of Tennessee; Dr. Percival Hall, of the District of Columbia; A. C. Manning, of Pennsylvania; A. P. Buchanan, of Texas; H. B. Fetterly, of Ontario.

Auricular section.—Mrs. Rachel D. Davies, of Pennsylvania, chairman; Marshall Hester, of Iowa; Glenn I. Harris, of Colorado; Margaret S. Kent, of Maryland; L. R. Divine, of Louisiana; George Bateman, of Nova Scotia.

Oral section.—Mary D. Cason, of Maryland, chairman; Pearl Herdman, of Missouri; Marion H. Lamb, of Pennsylvania; E. R. Abernathy, of Ohio; Sam B. Craig, of the District of Columbia; Edwin G. Peterson, of Saskatchewan.

Vocational section.—Tom L. Anderson, of Iowa, chairman; Bess M. Riggs, of Arkansas; A. L. Brown, of Florida; John E. Travis, of Indiana; H. J. Menzemer, of Kansas; Dean Tomlinson, of Manitoba.

Eastern section.—Alvin E. Pope, of New Jersey, chairman; Dr. E. A. Gruver, of Pennsylvania; Dr. Harris Taylor, of New York.

Southern section.—E. McK. Goodwin, of North Carolina, chairman; A. J. Caldwell, of Louisiana; Madison J. Lee, of Kentucky.

Western section.—Clarence J. Settles, of Idaho, chairman; Lyman Steed, of Oregon; Burton W. Driggs, of North Dakota.

Dr. GRUVER. If there is any miscellaneous business, we may consider it at this time.

Mr. Alvin E. Pope, on behalf of the New Jersey School for the Deaf, invited the convention to meet at Trenton, N.J., in the summer of 1933, in conjunction with other organizations concerned with the education of the deaf, in an International Congress on the Education of the Deaf.

It was voted to submit this matter for decision to the executive committee of the convention.

In the business which followed, officers for the ensuing term were elected, namely:

President.—Dr. Thomas S. McAloney, of Colorado.

Vice President.—Alvin E. Pope, of New Jersey.

Secretary.—Ignatius Bjorlee, of Maryland.

Treasurer.—Dr. J. Schuyler Long, of Iowa.

Directors.—Thomas Rodwell, of Manitoba; Dr. Charles R. Ely, of the District of Columbia; and Victor O. Skyberg, of Minnesota.

Whereupon, there being no further business to come before the convention, Dr. Gruver, as president, declared the twenty-seventh meeting of the Convention of American Instructors of the Deaf adjourned.

DEMONSTRATIONS

RHYTHM

MAUD CARTER, North Dakota School, Devils Lake, N.Dak.

Rhythm is usually thought of in a very limited sense; in poetry as a repetition of accent in a certain place, in music a repetition of accent at a certain measured time.

With children we think of their rhythmic ability in connection with their ability to keep time to music. But rhythm is much more than this. All the world is filled with rhythm. All nature moves in perfect rhythmic time. If one of the smallest of nature's planets should miss the slightest in its rhythmic pulsations, we tremble to think what the result would be. Yet if the inanimate bodies are so subject to the laws of a perfect rhythm, how much more filled with this law are our bodies. Our heart beats, our breathing, and our movements are all rhythmic. Rhythm, then, is within us, and it is the aim of the teacher to help the child awaken and give expression to this sense.

All trained physical activity reacts upon the mind, establishing coordination. All thinking is rhythmic, whether through action or speech.

VIBRATION

The first step in teaching rhythm is in establishing interest in vibration, for through the differences in the vibrations of various pitches that are apparent to the touch of the deaf child approximation of tone and pitch in different vocal registers may be reached. A grand piano is best for this work.

The children are grouped around the piano with their finger tips resting lightly on the top. The teacher plays a few measures very rapidly, then stops suddenly that the children may feel the vibrations. After this has been done a few times, the children are told to raise their hands when the music stops. They may do this exercise with eyes open or closed.

Next, show the children that all vibrations are not the same. The teacher plays very slowly and softly, the children respond by moving hands slowly up and down or by walking slowly with heads bowed; the teacher then quickly changes to loud, fast music and the children respond by waving hands, running, or skipping. After this exercise is perfected, give strong and weak chords. Write *strong, weak*, on wall slate, have children feel the chords played, and with a crayon mark on slate indicating which was played, as: Two strong, one weak; three weak, one strong; three weak, etc.

Before beginning voice work, show children that there is vibration in drums, bells, horns, tambourines, etc., and tell them that these vibrations produce sounds. Encourage the children to laugh or babble when giving these exercises; give this in the spirit of play; let the children be perfectly relaxed. When possible, group the children according to hearing and reaction to sound vibrations. Encourage always, never let a child lose faith in his ability to accomplish the desired result.

TIME

After the children are perfectly familiar with sound vibrations, begin working for rhythmic time. Play 2/4 time, have children place one hand on piano and with the free hand tap lightly on the back of the hand, feeling vibrations. Next, with backs to piano, clap time. Stand a little away from piano and clap time. Mark time with feet.

In this same way give 3/4 time, 4/4 and 6/8 time. After the children are proficient in this work, change time during exercise, as: Children with hands on piano, eyes shut, teacher plays 2/4 time, children tap time, teacher changes quickly to 4/4 or 6/8 time, class changes with her, etc.

VOICE

In beginning voice work, never force the voice. Work for quality only, strength will come from daily practice. Let the pupils see the trees being blown by the wind and tell them the wind says *oo oo oo*, and have them say *oo oo oo*. Make play of this beginning work; any forcing will cause tenseness of the organs of speech. (It is much easier to avoid mistakes than to correct them.) Let them imitate the school whistle or steam escaping from a train, as: *sh, sh, sh*; the big drum, *boom, boom, boom*. Here we begin working for head resonance. Let children feel vibrations in the cheeks or lips, but never in the nose.

First give *mumumum*, then *pum, pum, pum*, or *dum, dum, dum*. These exercises, with the larynx in its natural position, short *u*, produce a good head resonance.

Tell me what the cow says:

moo, moo, moo.

Tell me what the cat says:

meow, meow, meow.

Tell me what a baby says:

mama, mama, mama.

In all the work never lose sight of accent. In the exercises given for strong and weak chords, the foundation of accent work was laid. In the last exercise the teacher will strike a loud chord for *ma* and a weak chord of *ma*, *Mama*. Write the word given on the wall slate and underline the accented syllable. *Yes* ter day, etc. Have children clap sharply for strong and lightly for weak chords while words are being spoken. Do not confuse accent with work for high and low tones.

In developing pitch let the children see you play chords in the upper octave, tell them this is high; then in the lower octave tell them this is low. Then have them close their eyes and place their hands on the piano while you strike the different octaves and have them tell you from which part of the keyboard the sound came. Next, have them imitate the sound they feel by babbling high and low. They may lower their heads for the low tones, as this position relaxes the vocal chords and lowers the voice; tilt back the head for high tones, as this stretches the vocal cords and raises the voice. A relative change of pitch should be easily gotten. After high and low have been mastered, give middle tones.

For exact change of tone give an octave first:

<i>oo</i>	<i>ee</i>	<i>oo</i>	<i>ah</i>	<i>ee</i>
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Use B flat below middle C for low tone and its octave B flat above for high tone. Do not always give the same vowel for low or for high, for that tends to fix that element with that tone only. Give all vowels in different voice registers. Give the child a chance to receive the sound vibrations a number of times before he is required to interpret them. If at first the child cannot give the different tones, have him point to high and low as:

<i>oo</i>	<i>ah</i>	<i>ee</i>	<i>oo</i>	<i>oo</i>
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Time—

- A. Tap on piano.
- B. Clap time.
- C. Beat time.
- D. Count time.

Bodily rhythm—

- A. Running.
- B. Walking.
- C. Marching.
- D. Skipping.
- E. Dancing.

Voice—

- A. Strong—weak.
- B. High—low.
- C. Accent—phrasing.

Too much stress cannot be placed on accent. Encourage the children to bring in lists of words. They may keep rhythm books in which words and phrases are written. Teach the word accent. "Where is the accent?" "Your accent is wrong." "Your accent is right." "Which syllable should be accented?", etc.

In giving new words or phrases, speak distinctly but not too slowly. Have the children approximate as nearly as possible a normal rate of speech.

In teaching accent in both words and phrases it is well to give a short drill first as—

*pum PUM. I know.
pum PUM pum. I love you.
pum pum PUM. May I write?
pum PUM pum. To mor row, etc.*

In giving little songs to the young children, have them know the words perfectly before they attempt them at the piano. Have them "pum" to the music that they may get the rhythm of the music fixed in their minds before giving the words of the song.

Suggestions for songs for the young children:

Bow, Wow, Wow.
This is the Way We Bow to You.
Little Boy Blue.
Good Morning to You.
Bobby Shafto.
Little Bo Peep.

Any simple nursery rhymes.

For the higher primary:

Baa! Baa! Black Sheep.
Little Jack Horner.
Twinkle, Twinkle, Little Star.
Jack and Jill.
Two Little Black Birds.

Rock-a-bye Baby, etc.

For lower intermediate:

Soldiers' March Song.
Shadow Song.
Robin Red Breast.
A Christmas Song.
An Easter Song.
A State Song, etc.

For higher intermediate:

America.
Old Black Joe.
Sweet and Low.
Holy, Holy, Holy.
O Little Town of Bethlehem.
Old Kentucky Home, etc.

With the intermediate children teach the simple rules of inflection as given in all speech work. A period indicates the voice should be dropped at the end of the sentence. A comma indicates a rising inflection before the comma. A simple question indicates a rise at the end of the sentence, or a question to be answered with a phrase or sentence a rising then falling inflection.

If these simple rules are instilled in the children, they will use them subconsciously when speaking.

The purpose of rhythm, therefore, is threefold:

1. Rhythmical physical movements;
2. Cultivating an instinct for time;
3. Cultivating an instinct for accent or the modulation of the voice.

We have incorporated in our work a toy orchestra, which accentuates the vibrations and strengthens the stimulations the children receive. We want the children so filled with a sense of rhythm that their reaction will approximate as nearly as possible that of the hearing child.

TEACHING PRONOUNS TO THE FIRST-YEAR CLASS

JOSEPHINE F. QUINN, Minnesota School, Faribault, Minn.

I have nothing new or mysterious to offer on this worn subject, only I should like to demonstrate, if possible, how it can be done naturally and effectively by presenting the subject simply and clearly and sticking to the one pronoun until it is thoroughly understood and mastered before another is taken up. This, of course, is in written language. We begin the use of the pronoun toward the latter part of the year, possibly sometime in March, as:

John ran.
He fell.
He cried.
Mary walked.
She sat down.
She wrote.
Robert took a ball from a table.
He dropped *it*.
He rolled *it*.
He picked *it* up.
Eva took a coat from a hook.
She shook *it*.
She brushed *it*.
She put *it* on a chair.
Miss _____ called Emma.
She hugged *her*.
She kissed *her*.
She held *her*.
Joe chased Erma.
He caught *her*.
He whipped *her*.
He pulled *her* hair.
Beatrice followed Willis.
She pushed *him*.
She scolded *him*.
She brushed *his* coat.
She tied *his* necktie.
Jane and Anna fell.
They laughed.

They stood up.
They ran.
John and I took a book from a desk.
We opened *it*.
We read *it*.
We put *it* on the window sill.
Martha called Ila and Doris.
She petted *them*.
She hugged *them*.
She took some candy from a shelf.
She gave *it* to *them*.
They thanked *her*.
Mr. _____ wanted Jim and me.
He found *us*.
He scolded *us*.
He punished *us*.
We cried.
She picked *us* up.
She brushed *our* clothes.
She washed *our* hands.
Constance and Eileen played.
Mina called *them*.
She washed *their* faces.
She combed *their* hair.
Evelyn and I went out doors.
We skated.
We fell.
Dorothy saw *us*.

After each series of actions the whole class is required to write the description—those performing the action using the first person, and by constantly calling on different pupils to act all become accustomed to the use of the proper forms.

As can be seen, this is the merest outline; but various ways and means will suggest themselves by which the exercises may be varied and carried on through sequence action work, dictated stories, and original news items almost unlimited in their scope.

At the end of the year the pupils are able to use understandingly and fluently all of the simple personal pronouns, both singular and plural.

SEVENTH-YEAR LANGUAGE

MARJORIE CASEY, Manitoba School, Winnipeg, Manitoba

The series of demonstrations of "seventh-year language" was conducted with a group of pupils of an average age of 16. Two were congenitally deaf, while the others had lost their hearing during infancy. Only one had enough hearing to distinguish any spoken sounds, three were totally deaf, and the others could hear only loud noises.

During the seventh year an effort is made to achieve fluent language, and to help the pupils to appreciate the beauty of written expression. The teacher tells the pupils that their language should flow like a smooth stream. They readily grasp this idea and soon show their ability to improve their sentence structure.

Wherever possible the pupil discovers and corrects his own error. If he should fail to see his mistake, some other member of the class is usually ready to make the necessary alteration. In our class we have a simple system of correction markings, six only, easily grasped and used by the pupils. The errors, marked in colored chalk, are clearly seen. Sometimes the error is marked by one pupil and corrected by another; or, if the error be a common one, the error mark and correction may be made by one pupil. Occasionally the teacher must come to the rescue, but it is best to let the pupils make the correction. "It is the pupil's own work that helps him."

To achieve the desired smooth expression a great deal of connected language is written during the year, always striving to keep it alive by variety.

In order to obtain good paragraphing and sequence of events, we make class outlines of events of interest to all, early in the school year. The first demonstration showed the making of such an outline, A School Day. Each heading was expressed in a short phrase. Wherever possible the pupils suggested alternative phrases, with similar meaning. These were written in brackets below each original heading. This valuable practice of supplying other words, phrases, and even whole sentences, is used in many of our class exercises, as it greatly enriches each pupil's store of words.

The next step in the demonstration was a class outline of the annual school picnic. Each pupil then selected a topic from the outline and wrote a paragraph. Time permitted only a brief survey of the written exercises and the beginning of corrections. In the actual classroom we might next have had a short drill on the prevailing errors.

The second demonstration was to show a typical exercise in composition, the topic being, "Summer Plans." The pupils showed variety of expression, and corrected the errors. Such an exercise must be properly introduced by the teacher, and the interest of the pupils aroused, so that they have a very real desire to express themselves.

On the third day we demonstrated another form of expression, in the written reproduction, in prose, of Longfellow's Hiawatha's Hunting. This poem was chosen not only because of its beauty of expression, but also because of the simple narrative running through it. The poem was introduced by an informal talk about Indians and their hunting weapons, focusing on the bow and arrow. It was explained to the pupils that they were going to read a poem about an Indian boy. Taking their readers, they each read the poem very carefully. Outlines of the story followed. Then the pupils wrote their own impressions of the story.

Such an exercise would usually be spread over a longer period than the hour's demonstration allowed, and dramatization of it would be of value.

These pupils have been encouraged to read poetry, as well as prose, not simply to wrest a story from it but to feel its rhythm, to see its pictures, to appreciate its beauty, and to try to see the writer's viewpoint.

To think clearly, to express in clear natural language, to learn to appreciate good language—these are some of the objectives of the seventh year.

ARITHMETICAL METHODS

BARTON SENENIG, Pennsylvania Institution, Mount Airy, Pa.

Some years ago, Dr. Edward Brooks, then superintendent of the Philadelphia schools, felt that much of the teaching done at that time was ineffectual because the teachers relied too much on words to express ideas. He advised that the teachers act out and illustrate their teaching, so that a more marked effect would be produced on the minds of the children. We are sure that Dr. Brooks gave good advice, and if the advice had been given to teachers of the deaf it would have been even more to the point, because teachers of the deaf are constantly speaking to their pupils in a foreign language.

It must be admitted that arithmetic is a difficult subject. Normal children spend 7 and 8 years in mastering it, and many are hampered in their school work because they have not clearly grasped the fundamentals of the science. This is not all due to the difficulty of the subject. Many teachers are poorly qualified to make the subject matter plain. We do not ask for more time to be devoted to arithmetic, but we want better teaching. Our teacher-training schools devote much time to speech teaching and to language, but do they give due emphasis to pedagogics of arithmetic? With better teaching in arithmetic

our pupils will be better prepared to pursue successfully courses in high schools and in college, from which sources complaint has been made that pupils are no longer as well prepared in arithmetic as they used to be.

Mark Sullivan says that he owes his success in life to his teacher in arithmetic, David M. Senenig. This man had the faculty of laying down a substratum of ideas in teaching a subject, so that the pupils would grasp the salient ideas underlying the subject, and that would enable them to proceed with understanding. Any pupil who depended on memory alone was sure to fail, as the professor had an uncanny way of detecting any misunderstanding or lack of understanding of the points involved. He was equal to the county superintendent, who on his round among the district schools came to a school where a class was reciting in grammar. A boy was asked to define a noun. He said, "A noun is the name of a person, place, or thing," and he said it so glibly that the superintendent had doubts as to the boy's understanding of what he was saying; so he asked the boy to give an example of a noun. The boy said "an organ-grinder." He was asked what made him think of an organ-grinder. He said, "An organ-grinder is the name of a person who plays a thing." Though Sullivan made his mark in literature rather than in mathematics, he felt that the constant appeal made to his understanding by his teacher in arithmetic produced a mental effect that has stood him in good stead in all his writing. He generally knows what he is talking about. He grasps a situation, then he writes.

We rely too much on learning to do by doing. This method results in a manual dexterity of reckoning not at all commensurate with the ideas a pupil may have of a subject. Pupils are taught rules of operation, and when these are forgotten the pupils are at a loss as to how they should proceed. Fifty years ago, teachers used few devices and illustrations in teaching arithmetic. The arithmetics were full of rules and principles which pupils were supposed to master and then they would know how to proceed. Pupils would forget the rules from year to year, and much time was lost in this way. Many of the rules and principles were harder to understand than the subject matter of which they treated.

Many teachers of arithmetic are too wordy. Their pupils get lost in a maze of language. A case in point stands out very clearly in my memory. A girl did not understand a point in algebra, and the teacher, instead of illustrating the point, proceeded to elucidate the matter by talking about it. He poured forth a veritable torrent of words and the poor girl became more and more confused as he proceeded. He became angry, thinking that she was stubborn. He did not make one inch of headway in his explanation. This all happened over 45 years ago, and the impression made upon me, a pupil in that class, was that the teacher made a most lamentable showing. A short time ago four arithmetics, covering the work of the third, fourth, fifth, and sixth grades, came to hand. These books contained over 1,600 pages of matter. We would not think for a minute of using these books in our work. All the arithmetic that is required can be taught in less than 400 pages.

I have become thoroughly convinced that there is altogether too much work done with the lead pencil. When a problem is submitted the pupil immediately reaches for his pencil, as if the brains were in the pencil instead of in the head. Whole pages of problems may be done without the use of the pencil. Sometime ago I took charge of a class in arithmetic while the teacher was away on account of illness. I hung a chart with 15 questions on it before the class and took all the pencils away from the pupils. The names of the pupils were written on the board, and the numbers of the problems from 1 to 15 were written above and to the right of the names, and as the pupils answered the questions check marks indicating whether right or wrong were put after the names and under the number of the problem. The pupils were intensely interested. They did not know that they could do so much without pencils, and they rubbed their hands with great satisfaction as they answered correctly.

Memory has a large place in arithmetic. After things have been thoroughly explained, it is in order to remember important facts. As an example, $3\frac{1}{2}$ percent is the same as three eighths. Why not remember this and save the trouble of working out the result each time? About 50 members of the legislature came to our institution once upon a time to take a look at what we could accomplish. We had a demonstration of work in the chapel, and I was called upon to conduct the work in arithmetic. The class had been well drilled in

percentage and immediately knew the fractional values of the percents commonly in use. The exercise was conducted without the use of crayon or pencil, and the legislators were invited to do the work also. The pupils, with their knowledge of percents in terms of fractions, had the lead on the legislators all the way. Such questions as $1\frac{1}{4}$ is what percent of $2\frac{1}{2}$ were easy for the pupils, and hard for those who did not know the short-cut methods.

To sum up, arithmetic in the advanced grades should be a thought study. Any method that displaces the rational method is not the best. With objects, drawings, and other illustrations lead the pupil into an understanding of the matter you are trying to make plain to him. These remarks are introductory to the matter we shall now present. What we shall show is by way of suggestion. We cannot possibly cover the whole field of arithmetic in three sessions of an hour each.

NUMERATION AND NOTATION

In dealing with this subject, a line of 10 dots may be shown to illustrate a 10. Ten such lines, making a square will show the hundred. These hundred dots may then be brought into the compass of a small square and 10 such squares is a thousand, and 10 such rows of a thousand each gives a square of 10 thousand. (The squares of a hundred large dots and of 10 thousand small dots may be secured from Mr. Booth, superintendent of the Nebraska School, who has had them printed ready for use.) A million will be a square of 10 rows of 10 squares each of these 10-thousand-dot squares. This will cover an area of about 6 feet square. What is the value of all this? It will enable the pupils to form proper concepts of the relative values of tens, hundreds, thousands, and millions.

TABLE: 10 units (ones) = 1 ten
10 tens = 1 hundred
10 hundreds = 1 thousand
1,000 thousands = 1 million
1,000 millions = 1 billion
1,000 billions = 1 trillion, etc.

To read large numbers, we separate them into groups of three figures each beginning at the right of the number and counting toward the left; the first group representing the number of units, the second, thousands; the third, millions; the fourth, billions; etc., as follows:

trillions	billions	millions	thousands	units
xxx, xxx, xxx,	xxx, xxx, xxx,	xxx, xxx,		
106, 482, 060, 075				

The number written under the scheme would be read: One hundred six billion four hundred eighty-two million sixty thousand seventy-five. The word *and* is not used until we come to the decimal point.

The above number set down as spoken would be represented by the following numbers:

106,000,000,000	106 billion
482,000,000	482 million
60,000	60 thousand
75	seventy-five

We call this *analysis* of numbers.

In roman, the number would appear as follows:

CVI, CDLXXXII, LX, LXXV

FUNDAMENTAL OPERATIONS

After adding a lot of numbers, we wish to prove the result. We first add by carrying, and then we add each column separately and then add these results, as follows:

4836	49	We may begin at the left:
948	33	20
76948	51	27
52679	27	51
1346	20	33
8927	<u>232479</u>	49
86795		<u>232479</u>
232479		

The second and third method of adding admits of interruptions. One may stop to answer a telephone call and then proceed where one left off.

SUBTRACTION

In subtracting the following question, we borrow one from 600, leaving 599.

$$\begin{array}{r} 460085 \\ - 273492 \\ \hline 186593 \end{array}$$

We do not borrow one from 6 and write 9's for 0's.

We prove subtraction questions by adding the remainder to the subtrahend. In making change, a clerk does not subtract; he counts forward from the sum you owe to the money you have given him.

MULTIPLICATION

In multiplication questions, we can prove results by the method of casting out 9's.

4825 Add the digits in the multiplicand and cast out the 9's. The excess 346 will be 1. In the multiplier, the excess is 4. Multiplying the excesses 28950 together, we have 4. Casting the 9's out of the product, we also have 4. 19300 Therefore the result is correct.

14475 We cast the 9's out of a number by dividing by 9, and the remainder 1669450 is the excess.

DIVISION

In division questions, the dividend is the product of the divisor and the quotient, plus the remainder, if there is any remainder.

362 4876924 13472 Casting the 9's out of the divisor, the excess is 2. In the quotient the excess is 8. The product of the excesses is 16, and taking out 9, the excess is 7; to which we add the excess in the remainder which is 6. That makes 13, and taking out the 9 we have an excess of 4. If we cast out the 9's from the dividend, we also get 4. So we know that the question is correct.

$$\begin{array}{r} 362 \\ \underline{\times 13472} \\ 724 \\ 2534 \\ \underline{1086} \\ 1709 \\ 1448 \\ \underline{2612} \\ 2534 \\ \underline{784} \\ 724 \\ \underline{60} \end{array}$$

MENTAL TEST PROBLEMS

(NO PENCIL)

Most of our arithmetical problems are concerned with the meaning involved in problems and are not concerned with large figures. In teaching arithmetical language, we make most rapid headway by using small numbers and by doing problems without use of pencil. Examples:

- (1) John has 8¢; James has 6¢ more than John. Both have -----.
- (2) Frank has 15 marbles; Martin has 6 less. Both have -----.
- (3) Mary has 15¢; Sarah has 10¢ more than Mary, and Jane has 5¢ more than both. How much do they all have?
- (4) A square room is 15 feet long. How far around the room?
- (5) A room is 18 feet long and 15 feet wide. How far around it?
- (6) A boy sold all his marbles for 50¢. He lost 10¢ by the sale. How much had he paid for the marbles?
- (7) Jane had 40¢; she spent 15¢, and her aunt gave her 20¢. How much money had she then?
- (8) Dan bought a dozen apples for 24¢, and he sold all of them at 3¢ each. How much did he gain?
- (9) Mary has 12 nuts; Jane has 4, and Kate has 2. How will they share the nuts so that each will have the same?
- (10) If I had 15¢ more I could buy a 40¢ top. How much money do I have?
- (11) Tony worked from 10 o'clock in the forenoon till 2 o'clock in the afternoon. He got 30¢ an hour. How much did he earn?
- (12) If you buy something for 18¢ and give the clerk a half dollar, what pieces of money will he give you for change?
- (13) About how much is 4 times \$3.99?
- (14) Is 46198765476 divisible by 9? Can you tell without dividing?
- (15) If a girl earns \$12 a week and spends \$9 a week, how long must she work to save enough to buy a \$12 dress?
- (16) Jane has 3 yards of ribbon, but she needs 2 yards more. How much must she pay for the extra ribbon at 32¢ a yard?
- (17) Helen's marks in four studies are 84, 76, 92, and 88. What is her average?

NUMBERS

ODD, EVEN, COMPOSITE, AND PRIME

An *odd number* is not divisible by 2. Examples: 1, 3, 5, 7, 9, etc.

An *even number* is divisible by 2. Examples: 2, 4, 6, 8, 10, 12, etc.

A *composite number* can be factored. It can be divided by other numbers. Examples: 4, 6, 8, 9, 10, 12, 14, 15, 16, 18, 20, 21, 22, 24, 25, 26, 27, 28, 30, 32, 33, 34, 35, 36, 38, 39, 40, etc.

A *prime number* cannot be divided by other numbers without a remainder. Examples: 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, etc.

The *prime factors* of a number are those prime numbers that will produce a number when multiplied together. Thus, the prime factors of 35 are 5 and 7, because 5 times 7 equals 35; and 5 and 7 are prime.

DIVISIBILITY OF NUMBERS

A number is divisible by two if it is even.

A number is divisible by 3 if the sum of its digits is divisible by 3. 3177 is divisible by 3 because the sum of 3, 1, 7, and 7 is 18, which is divisible by 3.

A number is divisible by 4 if the number expressed by the last two figures to the right is divisible by 4. 7416 is divisible by 4 because 16 is divisible by 4.

A number is divisible by 5 if the last figure to the right is either 0 or 5. Thus 730 and 825 are divisible by 5.

A number is divisible by 6 if it is even and if the sum of its digits is divisible by 3. 624 is divisible by 6 because it is even, and the sum of the digits is divisible by 3.

A number is divisible by 8 if the number expressed by the last 3 digits to the right is divisible by 8. Is 18734 divisible by 8? No, because 734 is not divisible by 8.

A number is divisible by 9 if the sum of the digits is divisible by 9. Is 7641 divisible by 9? Yes, because the sum of 7, 6, 4, and 1 is divisible by 9.

These facts mastered by the pupils will help much in factoring and cancellation.

GREATEST COMMON DIVISOR AND LEAST COMMON MULTIPLE

The greatest common divisor of two or more numbers is the greatest number that will divide each of them without a remainder.

In keeping pupils from getting mixed between the greatest common divisor and the least common multiple, the teacher must call attention to the fact that the first is a *divisor* and that it is common to two or more numbers, and it is the greatest number that is common. What is the greatest common divisor of 24, 36, and 72? 2, 3, 4, and 6 are divisors, but they are not the greatest; 12 is the greatest. The question may be set down as follows:

$$\begin{array}{r} \text{G.C.D. } 24 \\ ? \\ 36 \\ 72 \end{array}$$

Most questions like this should be done by inspection, but a method of doing any greatest common divisor problem should also be taught. By the rules we learned above, we see that 4 is a common divisor, and after dividing by 4, we see that 3 is a common factor of the quotients that remain. Taking out 3, we see that there is no other common factor. So, $4 \times 3 = 12$ is the greatest common divisor.

Method:

$$\begin{array}{r} | 24-36-72 \\ 4 | \\ | 6-9-18 \\ 3 | \\ | 2-3-6 \\ | \end{array}$$

Greatest common divisor is $3 \times 4 = 12$

NOTE.—The greatest common divisor of two numbers is also a divisor of their difference. This fact helps where large numbers are involved. Thus, What is the greatest common divisor of 296 and 333? Their difference is 37, and by trial we see that it divides each of the numbers and is the greatest common divisor.

LEAST COMMON MULTIPLE

The least common multiple of two or more numbers is the least number that contains each of them a whole number of times without a remainder. What is the least common multiple of 24, 36, and 72?

The question may be set down thus:

$$\begin{array}{r} \text{24 L.C.M.} \\ 36 ? \\ 72 \end{array}$$

In finding the least common multiple we proceed as in greatest common divisor, but after we have found the common factors we find the remaining prime numbers that are in the remaining quotients. Thus:

$$\begin{array}{r} | 24-36-72 \\ 3 | \\ | 6-9-18 \\ 2 | \\ | 2-3-6 \\ 3 | \\ | 1-3-3 \\ | \end{array}$$

Least common multiple is $4 \times 3 \times 2 \times 3 = 72$

FRACTIONS

By drawings we show that $\frac{1}{2}, \frac{1}{3}, \frac{1}{4}, \frac{1}{5}, \frac{1}{6}, \frac{1}{7}$, etc., are the same.

This shows that if both numerator and denominator are multiplied or divided by the same number the value of the fraction is not changed. We also show by drawings that $\frac{1}{2}$ is large and $\frac{1}{10}$ is very small. This shows that a large denominator means a small fraction. The denominator shows into how many parts the unit is divided. If a pie is divided into many pieces, each piece will be very small. The denominator is the name of a part.

A fraction may also be looked upon as one number divided by another. Thus, $\frac{1}{4}$ is the same as $12 \div 4 = 3$; $\frac{1}{4} = 4\frac{1}{4}$. In adding fractions, we add the numerators, as the denominator is only the name of a part. Thus—

$$\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} = 2\frac{1}{4} = 2\frac{1}{2}$$

Another way:

$$\begin{array}{r} 7 \text{ eighths} \\ 3 \text{ eighths} \\ 9 \text{ eighths} \\ 2 \text{ eighths} \\ \hline 21 \text{ eighths} \end{array}$$

This method also holds true in subtraction:

$$\begin{array}{r} 7 - 3 = 4 \\ 7 \text{ eighths} \\ - 3 \text{ eighths} \\ \hline 4 \text{ eighths} \end{array}$$

If fractions do not have the same denominators, we multiply the numerators and denominators by such numbers as will make the denominators the same.

In multiplying a fraction by a whole number, we multiply only the numerator. Thus—

Other way:

$$\begin{array}{r} 4 \times \frac{3}{8} = 1\frac{1}{2} \\ 3 \text{ eighths} \\ \times 4 \\ \hline 12 \text{ eighths} \end{array}$$

In dividing a fraction by a whole number, we divide only the numerator if it is divisible.

Mixed numbers are whole numbers and fractions. $6\frac{1}{4}$, $8\frac{1}{2}$, $1\frac{1}{3}$, $9\frac{1}{5}$ are mixed numbers. Let us add these mixed numbers.

$$\begin{array}{r} 6\frac{1}{4} = \frac{25}{4} \\ 8\frac{1}{2} = \frac{17}{2} \\ 1\frac{1}{3} = \frac{4}{3} \\ 9\frac{1}{5} = \frac{46}{5} \\ \hline 24 \\ + 2\frac{1}{2} \\ \hline 26\frac{1}{2} = \text{the sum} \end{array}$$

Draw a line between the integers and the fractions, or else you say that $6\frac{1}{4} = \frac{25}{4}$, which is not true. Only the fractions are changed to sixtieths.

In multiplying whole numbers by mixed numbers, multiply by the fraction first. Thus, $6\frac{1}{4} \times 12 = ?$

$$\begin{array}{r} 12 \\ \times 6\frac{1}{4} \\ \hline 4) 36 \\ \hline 9 \\ \hline 81 \end{array}$$

Division:

$$12 \div 2\frac{1}{2} = \frac{12}{2\frac{1}{2}} = 2\frac{4}{5} = 4\frac{1}{2}$$

We multiply both numerator and denominator by 2, and then we have a question in whole numbers. This is the same as multiplying both the dividend and divisor by the same number. Divide 45 by $3\frac{1}{4}$.

$$\begin{array}{r} 3\frac{1}{4} \quad 45 \\ \times 4 \quad \times 4 \\ \hline 15) 180 \\ \quad \quad \quad 12 \text{ times} \end{array}$$

This method will do in arithmetic, but not in algebra.

$45 + 3\frac{1}{4} = 45 + 15/4 = 45 \times 4/15 = 12$. This is the algebraic way. Invert the divisor and multiply. If we want to multiply 12 by $15/4$, we set down the question like this $12 \times 15/4$; but since division is the inverse of multiplication, when we divide we invert the divisor, and multiply. It is very easy to say that to divide fractions we invert the divisor and multiply, but a veteran teacher also knows that the pupils will invert the dividend instead of the divisor. So, a good way to begin is to multiply both dividend and divisor by a number that will remove all fractions and then proceed as in whole numbers.

CANCELLATION

Cancellation is the process of dividing both numerator and denominator by the same number when we multiply fractions. Under the heading, "Divisibility of numbers," we have shown what numbers are divisible by 2, 3, 4, 5, 6, 8, and 9, and much practice work should be given in cancellation, as it is a short-cut way of doing problems that would otherwise require much figuring. If we do this problem $\frac{1}{2} \times \frac{3}{4} \times \frac{7}{8} \times \frac{11}{12} \times \frac{13}{14}$ by cancellation, we find that the answer is $\frac{1}{4}$. Some of the pupils will put down 54. Care must be taken by the teacher to show that when all the numbers in the numerator have been canceled out there are a number of ones which multiplied together will make 1 in the numerator.

PARTS OF A DOLLAR

Whole pages of problems may be done in arithmetic without the use of a pencil if one is familiar with the fractional parts of a hundred.

In order to make it easier to remember them we shall group these parts according to the denominators of fractions:

$\$2^{\frac{1}{2}} = 50\text{¢}$	$\$3^{\frac{1}{3}} = 33\frac{1}{3}\text{¢}$	$\$4^{\frac{1}{4}} = 25\text{¢}$	$\$5^{\frac{1}{5}} = 20\text{¢}$	$\$6^{\frac{1}{6}} = 16\frac{2}{3}\text{¢}$	$\$8^{\frac{1}{8}} = 12\frac{1}{2}\text{¢}$
$\$3^{\frac{2}{3}} = 66\frac{2}{3}\text{¢}$	$\$4^{\frac{2}{4}} = 50\text{¢}$	$\$5^{\frac{2}{5}} = 40\text{¢}$	$\$6^{\frac{2}{6}} = 33\frac{1}{3}\text{¢}$	$\$8^{\frac{2}{8}} = 25\text{¢}$	
$\$4^{\frac{3}{4}} = 75\text{¢}$	$\$5^{\frac{3}{5}} = 60\text{¢}$	$\$6^{\frac{3}{6}} = 50\text{¢}$	$\$8^{\frac{3}{8}} = 37\frac{1}{4}\text{¢}$		
$\$5^{\frac{4}{5}} = 80\text{¢}$	$\$6^{\frac{4}{6}} = 66\frac{2}{3}\text{¢}$	$\$8^{\frac{4}{8}} = 50\text{¢}$	$\$10^{\frac{4}{10}} = 40\text{¢}$	$\$12^{\frac{4}{12}} = 33\frac{1}{3}\text{¢}$	
$\$6^{\frac{5}{6}} = 83\frac{1}{3}\text{¢}$	$\$8^{\frac{5}{8}} = 62\frac{1}{2}\text{¢}$	$\$10^{\frac{5}{10}} = 50\text{¢}$	$\$12^{\frac{5}{12}} = 50\text{¢}$	$\$16^{\frac{5}{16}} = 37\frac{1}{4}\text{¢}$	
$\$7^{\frac{6}{7}} = 87\frac{1}{2}\text{¢}$		$\$11^{\frac{6}{11}} = 54\text{¢}$			
$\$10^{\frac{1}{10}} = 10\text{¢}$	$\$12^{\frac{7}{12}} = 70\text{¢}$	$\$11^{\frac{1}{11}} = 91\frac{2}{3}\text{¢}$			
$\$10^{\frac{2}{10}} = 5\text{¢}$	$\$10^{\frac{8}{10}} = 8\text{¢}$	$\$10^{\frac{1}{10}} = 1\text{¢}$			
$\$10^{\frac{3}{10}} = 30\text{¢}$	$\$10^{\frac{9}{10}} = 90\text{¢}$	$\$10^{\frac{3}{10}} = 18\frac{3}{4}\text{¢}$	$= 3 \times 6\frac{1}{4}\text{¢}$		
$\$10^{\frac{4}{10}} = 2\text{¢}$	$\$12^{\frac{1}{12}} = 8\frac{1}{3}\text{¢}$	$\$10^{\frac{5}{10}} = 5\text{¢}$	$\$10^{\frac{5}{10}} = 31\frac{1}{4}\text{¢}$	$= 5 \times 6\frac{1}{4}\text{¢}$	
$\$10^{\frac{5}{10}} = 1\text{¢}$	$\$12^{\frac{5}{12}} = 41\frac{2}{3}\text{¢}$	$\$10^{\frac{7}{10}} = 7\text{¢}$	$\$10^{\frac{7}{10}} = 43\frac{3}{4}\text{¢}$	$= 7 \times 6\frac{1}{4}\text{¢}$	
$\$10^{\frac{6}{10}} = \frac{3}{5}\text{¢}$	$\$12^{\frac{7}{12}} = 58\frac{1}{3}\text{¢}$	$\$10^{\frac{9}{10}} = 9\text{¢}$	$\$10^{\frac{9}{10}} = 56\frac{1}{4}\text{¢}$	$= 9 \times 6\frac{1}{4}\text{¢}$	

Questions like the following may easily be done without pencil:

72 yards @ $83\frac{1}{3}\text{¢} = \60 ; 84 pounds @ $16\frac{2}{3}\text{¢} = \14 ; 66 pounds @ $66\frac{2}{3}\text{¢} = \44 ; 24 bushels @ $\$1.33\frac{1}{3} = \32 .

Also, $48 \times 66\frac{2}{3} = 3,200$; $36 \times 12\frac{1}{2} = 450$; $96 \times 16\frac{2}{3} = 1,600$.

Parts of a thousand may also be made use of in rapid calculation: 500 is $\frac{1}{2}$ of a thousand; 250 is $\frac{1}{4}$ of a thousand; 125 is $\frac{1}{8}$; 750 is $\frac{3}{4}$; 875 is $\frac{7}{8}$.

$80 \times 250 = 20,000$; $48 \times 875 = 42,000$; $32 \times 750 = 24,000$; $32 \times 375 = 12,000$

Not only in multiplication but also in division this is a short-cut way of reaching results. Thus, if the total cost is $\$41$ and the price per yard is $33\frac{1}{3}\text{¢}$, how many yards were bought? $41 \div \frac{1}{3} = 41 \times 3 = 123$, the number of yards.

PRACTICAL MEASUREMENTS

Show every measure. Develop every table. Measure an acre in a nearby field. Walk a mile and measure it. Indicate approximately a square mile. Show the parts of an inch down to $\frac{1}{16}$ inch. Make a pile of paper 1 inch high and have the class count the number of papers. We found that there were 260 sheets. So 260 sheets were 1 inch thick and each paper was $\frac{1}{16}$ inch thick.

Develop the "what part" idea. Show that the thing you compare with goes into the denominator of a fraction. Thus, $7\frac{1}{2}$ inches is what part of a foot?

$$\frac{7\frac{1}{2} \text{ in.}}{12 \text{ in.} = 1 \text{ ft.}} = \frac{7\frac{1}{2}}{12} = \frac{15}{24} = \frac{5}{8} \text{ of a foot}$$

In teaching square measure, map out the number of units of area, so that the pupil will see why the number of units in length multiplied by the number in width will give the number of square units, provided that the units of length and width are of the same denomination.

In finding the number of square units in the four sides of a room, multiply the distance around the room in feet by the height in feet to find the number of square feet in all the sides at once. This saves time.

In measuring land, show how it comes that $30\frac{1}{4}$ square yards make a square rod. A square rod is a rod long and a rod wide, or it is $5\frac{1}{2}$ yards long and $5\frac{1}{2}$ yards wide. Indicate on the board how a $5\frac{1}{2}$ -yard square makes $30\frac{1}{4}$ square yards [draw].

Another way:

$$5\frac{1}{2} \times 5\frac{1}{2} = \frac{11}{2} \times \frac{11}{2} = \frac{121}{4} = 30\frac{1}{4}, \text{ the number of square yards}$$

How do we know that 640 acres make a square mile? A square mile is a mile long and a mile wide, or 320 rods long by 320 rods wide. The area is 320×320 square rods, and since it takes 160 square rods to make one acre,

$$\frac{320 \times 320^2}{160} = 640, \text{ the number of acres}$$

In measuring areas, schools for the deaf should include the rectangle, parallelogram, triangle, trapezoid, and circle. The area of the rectangle has already been touched upon. If one end (triangular) is cut off from a paper parallelogram and is inverted and placed at the other end we have a rectangle of the same base and altitude as that of the parallelogram. So, the base times the altitude expressed in the same units of measure will give the number of units of area. The area of a triangle may be mapped out to show that the area is half that of a rectangle of the same base and altitude. The area of a trapezoid is the area of two triangles, one of which has the upper base of the trapezoid for its base and the other has the lower base for its base and both have the same altitude. The area is quickly found by multiplying the average of the two bases by the altitude.

THE CIRCLE

If a string is passed around the circumference of a cylindrical can and is then applied to the diameter of the circular base, we find that its length is the length of three diameters and about one seventh of a diameter; more exactly 3.1416 diameters, or πD . π represents the number 3.1416 and D is the diameter. Since the diameter is twice the radius, $2r$ may be put in place of D and we then have $2\pi r$ as the circumference of the circle.

In finding the area, we may look upon the circle as a very great number of triangles each having its base in the circumference of the circle and its vertex at the center. The sum of all the bases is the circumference, or $2\pi r$, and the altitude of each triangle is r ; so the sum of the areas of all these triangles is $\frac{1}{2}$ of r times $2\pi r$ or πr^2 . This may all be better shown by a drawing, showing that about $3\frac{1}{4}$ square, each r by r make up a circle. The teacher should make a good drawing and hang it up before the class. Inscribe a 12-inch circle in a square and draw two perpendicular diameters to the points of tangency. That will divide the large square into four equal squares each r by r , but one corner of each square lies outside of the circle, and these areas must be subtracted from one of the squares, leaving three squares and about $\frac{1}{4}$ of a square as the area of the circle.

CUBIC MEASURE

Make a pile of cubic inch blocks and have the pupils calculate how many there are without counting them all. This problem will illustrate the method to be pursued: A pile of cubic inch blocks is 8 inches long, 4 inches wide and 3 inches high. How many blocks are there?

$$\begin{array}{r} 8 \text{ blocks in one row} \\ 4 \text{ rows} \\ \hline \end{array}$$

$$\begin{array}{r} 32 \text{ blocks in one layer} \\ 3 \text{ layers} \\ \hline \end{array}$$

$$96 \text{ blocks in the pile}$$

We see that if we multiply the length in inches by the width in inches and then by the height in inches, we find the number of cubic inches in the space. The same holds true for any other measures.

DECIMALS

If we draw a 10-inch square, we may separate it into 10 equal parts, and each part will be one tenth of the square. This may also be divided into 10 equal parts, and each part will be a hundredth of it. Dividing this part into 10 parts, we have each part as a thousandth of it; and dividing by 10 we have one ten-thousandth of it. Dividing by 10 again, we get down to a mere speck—one hundred-thousandth. The pupil sees that as we go to the right from the decimal point the decimal figures are less and less in value.

10	1. square.
10	.1, or $\frac{1}{10}$ of it.
10	.01, or $\frac{1}{100}$ of it.
10	.001, or $\frac{1}{1000}$ of it.
10	.0001, or $\frac{1}{10000}$ of it.
	.00001, or $\frac{1}{100000}$ of it.

In reading decimals, we read the number following the decimal as the numerator of a fraction, and the denominator will be 1 followed by as many noughts as there are figures after the decimal. Thus,

.375 is read three hundred and seventy-five thousandths.

.0375 is three hundred and seventy-five ten-thousandths.

.000375 is three hundred and seventy-five millions.

145.065 is read one hundred and forty-five and sixty-five thousandths.

All fractions may be changed to decimals, and all decimals may be changed to fractions. Thus,

$$\frac{3}{4} = .75; .375 = \frac{375}{1000} = \frac{3}{8}.$$

Any fraction may be readily changed to a decimal by dividing the numerator by the denominator.

In adding and subtracting decimals, the decimal points must be in a vertical line, as it separates the whole numbers from the decimal parts that follow.

In multiplying decimals, we proceed as in ordinary multiplication, but there will be as many decimal places in the product as in both the multiplier and multiplicand. This is readily shown, as follows:

$$\begin{array}{r} .7 \times .05 = .035 \\ \times .05 \\ \hline .035 \end{array}$$

In dividing, we subtract the number in the divisor from the number in the dividend.

$$\begin{array}{r} .05) .035 \\ \underline{-} .05 \\ .035 \\ \underline{-} .05 \\ .000 \end{array} \quad \begin{array}{r} 3 - 2 = 1 \\ \hline .7 = \text{quotient} \end{array}$$

It does not change a decimal by adding noughts to it.

$$.6 = .60 = .600; \text{ for } \frac{6}{10} = \frac{60}{100} = \frac{600}{1000}$$

Decimals like .62½, .37½, .87½, .41½ have the same fractional value as the same number of cents have to a dollar. But money must be written with the dollar sign (\$).

PERCENTAGE

Percent means hundredth. So we see that percent is expressed by a decimal of two places. 50 percent is .50; 5 percent is .05. Draw a circle and show all of it as 100 percent of it. 50 percent will be half of it. Show 25 percent of it and one percent of it. The symbol of percent is (%). 15 percent is 15%. All percents may be changed to fractions and all fractions may be changed to percents. $37\frac{1}{2}\%$ is $\frac{3}{8}$, just as $37\frac{1}{2}\%$ is $\frac{3}{8}$.

Percent of a thing is part of it. What percent of 10 is $2\frac{1}{2}$?

$$\frac{2\frac{1}{2}}{10} = \frac{5}{20} = \frac{1}{4} = 25\%. \quad 2\frac{1}{2} \text{ is } 25\% \text{ of } 10.$$

INTEREST

Interest is money paid for the use of borrowed money. The money that is loaned is called the *principal*. The *rate* is the number of cents that is paid for the use of a dollar for a year, and it is expressed in terms of a decimal. A rate of .06 means that 6¢ is paid for the use of 100¢ for a year.

Find the interest on \$2,000 at 6 percent for 30 days.

\$2,000 is the principal

.06 is the rate

30 days is $\frac{30}{360}$ or $\frac{1}{12}$ year.

12) \$120.00 is the interest for a year

\$10. is the interest for 30 days.

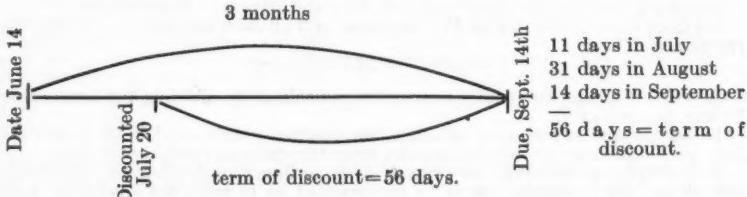
$\$2,000 + \$10 = \$2,010$ = the *amount*. The amount is the principal plus the interest.

In reckoning interest, reckon 360 days for an interest year, but reckon the exact number of days between dates, if the dates are less than a year.

BANK DISCOUNT

If I give a bank a note for \$3,000 and want to get \$3,000 from the bank, I pay the interest on the note immediately, and I will pay back the \$3,000 when the note is due. A 3-month note dated June 10 is due September 10. A 90-day note dated June 10 is due September 8. Some States allow 3 days of grace and make you pay interest for those 3 additional days.

I hold a 3-month note dated June 14. The face of the note is \$1,800 and it does not bear interest. On July 20, I want money for the note and sell it to a bank. How much will the bank give me for the note on July 20, money worth 6 percent? (No days of grace.)



The note is not worth \$1,800 before September 14, so, if the bank buys the note from me 56 days before that time, it will subtract interest for 56 days at 6 percent and give me the remainder, or proceeds.

$$1,800 \times \frac{6}{100} \times \frac{56}{360} = \$16.80 = \text{the discount}$$

I will get \$1,783.20 for the note. $\$1,800 - \$16.80 = \$1,783.20$, proceeds.

If a note bears interest, we find the amount of the note when it is due, and then we find the discount on the amount.

PROBLEMS TO BE DONE WITHOUT PENCIL

1. $5\frac{1}{2}$ yards of cloth cost 66¢; $12\frac{1}{2}$ yards of the same cloth would cost?
2. What part of a cubic yard is 3 cubic feet?
3. What is the difference between a 40-foot square and two 20-foot squares?
4. What is the interest on \$600 for 1 year 6 months at 6%?
5. Sold an article for \$60, thereby losing 70% of the cost. Find cost.
6. How many square yards in the surface of a cubic yard?
7. 180 is 25% less than what number?
8. Athletics won 30 games and lost 15. What decimal will show their average in the newspapers?
9. Buy for \$2 and sell for \$2.4. What percent is gained?
10. What is the difference between $\frac{1}{2}$ of 20 and $20 - \frac{1}{2}$?
11. 20% of 115 is $33\frac{1}{3}\%$ of what number?
12. In a certain school 40 pupils are present and 10 are absent. What percent are absent?
13. $1\frac{1}{4}$ yards are how many inches?
14. Bought 5 bushels of nuts at a dollar a peck, and got 20% off for cash. How much did I pay?
15. Sold a saddle for \$18, which was $12\frac{1}{2}\%$ more than the cost. Cost was?
16. $64 \times 125 = ?$ 17. $84 \times 250 = ?$ 18. $\$40 - 62\frac{1}{2}\% = ?$
19. A yard of ribbon contains 144 square inches. How wide is it?
20. What is $\frac{1}{4}\%$ of \$3,600?
21. 2 is what percent of 600?
22. What percent of 9 is $20\frac{1}{2}\%$?
23. If 3 oranges cost 15¢, how much will 8 eggs cost?

PROPORTION

We know that $\frac{3}{4} = \frac{9}{12}$
or $3 \div 4 = 9 \div 12$;
or $3:4 = 9:12$;
or $3:4::9:12$

3 and 12 are called the *extremes*.
4 and 9 are called the *means*.
 $3 \times 12 = 4 \times 9$

So, we see that the product of the means equals the product of the extremes. $3:4$ is called a *ratio*. $9:12$ is a ratio. When one ratio is equal to another we have a *proportion*. We read the proportion: $3:4::9:12$, 3 is to 4 as 9 is to 12. $3:4::9:15$ is not a proportion, because it does not represent the truth.

When more of one thing makes more of another, we say they vary *regularly*, as, more butter will cost more money. When *more* of one kind makes *less* of another, we say that they vary *inversely*. More men will take less time in building a house.

Type problems in proportion:

- (1) If 4 pounds of butter cost \$1.12, how much will 6 pounds cost?

$$\begin{array}{rcl} 4 \text{ pounds cost } \$1.12 \\ \downarrow & & \downarrow \\ 6 \text{ pounds cost } x \end{array}$$

Then, $4:6::\$1.12:x$
 $4x = \$6.72$
 $x = \$1.68$ for 6 pounds.

You will note that the two arrows point the same way, and in writing the proportion we simply follow the arrows.

- (2) If 8 men can dig a ditch in 20 days, how long would it take 10 men to dig the same ditch?

$$\begin{array}{rcl} 8 \text{ men take } 20 \text{ days} \\ \downarrow & & \uparrow \\ 10 \text{ men take } x \text{ days} \end{array}$$

The more men there are the less number of days it would take, and the arrows will not point the same. Let us write the proportion $y:b$ following the arrows.

$$\begin{array}{l} 8:10::x:20 \\ \text{Product of means} = \text{product of extremes} \quad 10x = 160 \\ \qquad \qquad \qquad x = 16 \text{ days for 10 men} \end{array}$$

COMPOUND PROPORTION

In compound proportion there are more than two ratios.

Problem:

If 45 horses eat $2\frac{1}{2}$ tons of hay in 30 days, how many tons would last 90 horses 75 days?

In this problem we want to find the number of tons. More horses will take more tons, and in more days more tons will be consumed. So, we see that the problem is one of regular proportion.

$$\begin{array}{c} \downarrow 45 \text{ horses eat } | 2\frac{1}{2} \text{ tons in } | 30 \text{ days} \\ \downarrow 90 \text{ horses eat } | x \text{ tons in } | 75 \text{ days} \\ 2\frac{1}{2}:x::45:90 \\ | 30:75 \\ 2x \times 45 \times 30 = 2\frac{1}{2} \times 90 \times 75 \\ x = \frac{2\frac{1}{2} \times 90 \times 75}{45 \times 30} = 12\frac{1}{2} \text{ (tons).} \end{array}$$

(2) Problem:

If 10 men in 35 days, working 8 hours a day, can dig a ditch 200 rods long, 1 yard wide, and 8 feet deep, how many days would it take 12 men, working 6 hours a day, to dig a ditch 300 rods long, 2 yards wide, and 12 feet deep? (In this problem we want to find the number of days, and the arrows will show how the ratios are to be written regardless of the numbers involved in the problem.)

$$\begin{array}{c} 10 \text{ men } \uparrow 35 \text{ days } | 8 \text{ hours per } \uparrow \text{day } 200 \text{ long } | 1 \text{ wide } | 8 \text{ deep } \\ \text{men } | x \text{ days } \downarrow \text{hours per } | \text{day } \quad \text{long } \downarrow \text{wide } \downarrow \text{deep } \\ \boxed{12:10} \qquad \quad x \times 12 \times 6 \times 200 \times 1 \times 8 = 35 \times 10 \times 8 \times 300 \times 2 \times 12 \\ \boxed{6:8} \qquad \quad x = \frac{35 \times 10 \times 8 \times 300 \times 2 \times 12}{12 \times 6 \times 200 \times 1 \times 8} = 175 \text{ (days).} \\ \boxed{200:300} \\ \boxed{1:2} \\ \boxed{8:12} \end{array}$$

This problem in itself may be absurd, but the law governing the ratios is beautiful. Any numbers that you may put in place of those in the problem will not change the direction of the arrows. How to decide as to the direction of the arrows is the only problem involved, since you simply follow the arrows in writing the ratios.

In the problem you want to find the number of days, and you compare all other terms involved with reference to their effect on the number of days. Point the arrow for days down, then the arrow for men will point upward, because the number of men varies inversely with the number of days. The hours-per-day arrow will also point upward because the more hours a day you work the less the number of days it will take. The last three arrows all point down because they relate to the size of the ditch. The more ditch there is the more days it will take. Now write the ratio containing x first, following the arrow, and then write the other ratios as the arrows indicate.

Most problems generally done by analysis can be done by proportion in less time.

TAXES, STOCKS, AND BONDS

Taxes must be paid by the people to carry on government.

(1) The tax rate in a certain city is \$2.86 per hundred dollars. What is the tax on a house assessed at \$12,000?

$$\begin{array}{r} 12000 \div 100 = 120 \\ \hline & \$2.86 = \text{tax on } \$100 \\ & 120 \text{ hundreds} \\ \hline & 5720 \\ & 286 \\ \hline & \$343.20 = \text{tax on the house} \end{array}$$

(2) The budget of a certain city for all departments is \$90,000,000, and the assessed value of all taxable property is \$3,600,000,000. What would the tax rate be for that city?

$$\text{The rate would be } \frac{90,000,000}{3,600,000,000} = \frac{1}{40} = .025$$

On one hundred dollars, the tax would be $\$100 \times .025 = \2.50

STOCKS

The street railway in a city cost \$30,000,000. This money was divided into shares of \$50 each, and the shares were sold to people. It is these people who own the street railway.

The stock is now selling at \$40 a share, and a share pays \$4 a year dividend. Shall we buy some shares? We would get \$4 for \$40, or $\frac{4}{40} = \frac{1}{10} = 10\%$ on our investment. If we put our money on interest, we will get only 5 per cent. I have \$2,000. How many shares can I buy with it? I can get 50 shares. Since each share pays \$4 dividend, I would get \$200 income in a year.

Which will give me the better income, to buy Hudson Motors at \$12½ a share, or General Motors at \$32 a share, if the dividend rate on Hudson Motors is \$1 and on General Motors \$3?

$$\frac{1}{12\frac{1}{2}} = \frac{2}{25} = 8 \text{ percent}$$

$$\frac{3}{32} \times 100 \text{ percent} = 9\frac{1}{2} \text{ percent.}$$

I will get the higher dividend by buying General Motors stock. Show the pupils a stock certificate. Also explain "brokerage" and the business of a broker. Show the stock-market report in a newspaper.

BONDS

Most large companies issue bonds as well as stock. Bonds bear interest, and the interest must be paid on bonds before dividends can be paid on stock. Bonds are generally for \$100, or \$500 or \$1,000. The rate of interest is stated in the bond. Bonds may sell at par, above par, or below par; but the interest is always reckoned on the par value. If I buy a thousand-dollar bond for \$850, and the rate of interest is 6 percent, what will be my rate of income.

$$\begin{array}{r} \$1,000 \text{ is the par value} \\ .06 \text{ is the interest rate} \end{array}$$

$$\underline{\quad\$60.00 \text{ is the interest for a year}}$$

I paid \$850. I get \$60 on \$850

$$\frac{60}{850} \times 100\% = 7+0/20, \text{ the rate of income.}$$

Companies may earn enough to pay the interest on the bonds, but not enough more to pay interest on stock. So, it is evident that bonds are the safer investment.

BUSINESS PAPERS

We deem that knowledge of business is so important in these days that we take a year in the A grade to teach double entry bookkeeping. In taking this course, the pupil becomes familiar with the different business papers of which he should have knowledge, and he is also making use in a very practical way of the knowledge which he has accumulated in the years devoted to arithmetic.

The instructor in bookkeeping gave me the following list of business forms with which the pupils come in touch in carrying on a regular business as laid down in the course:

(1) Power of attorney, (2) lease, (3) an invoice, (4) cash—bills, coins, checks; (5) a receipt, (6) an order, (7) a selling price-list, (8) a bill, (9) a report, (10) a promissory note, receivable, payable; (11) a deposit slip, (12) a bank book, (13) a check book, (14) a check stub, (15) a check, (16) an expense bill, (17) a freight and cartage bill, (18) furniture and fixture bill, (19) a loan note, (20) a discount memorandum, (21) a professional service bill, (22) a bill of lading, (23) Bank statements of deposits, checks, balances; (24) inventory, (25) trial balance, (26) proof balance, (27) journal, (28) ledger, (29) statements, (a) profit and loss, (b) financial statement of liabilities and assets.

In the development work of this study, the pupil is taught (1) to classify debits and credits, (2) journalizing, (3) posting, (4) trial balances, (5) the development of statements.

The bookkeeping class will be the senior class in the following year.

The year's work in bookkeeping gives much needed information to pupils and it is a great help to those who take the business course in high schools.

AN OUTLINE OF INTERMEDIATE GEOGRAPHY AS TAUGHT IN THE PENNSYLVANIA INSTITUTION FOR THE DEAF

By Miss MARION H. LAMB, of the Pennsylvania Institution

INTRODUCTION

Geography has been defined as "the study of the earth in its relation to man. Thus defined, it includes a knowledge of man in his relation to other men and to the plants, animals, and minerals, to the atmosphere and to the forms of land and water."

I know of no better definition.

What more fascinating study can there be! I believe there is in all of us a desire to learn what the other half of the world is like and how its peoples live. Else why the tremendous sale of travel books, and why do lecturers like Lowell Thomas, Carveth Wells, Richard Halliburton, and Admiral Byrd draw such crowds?

And that our deaf children have this desire, I am certain. For all our classes "love" geography. It has become, one might say, a tradition in our hall that geography is "very interesting", and the older classes pass this on to the younger ones, and they look forward to the time when they, too, will be among "the elect."

One of my pupils this year decided that he could improve upon my program and so informed me. When I asked him what change he would suggest, he said that he would like to have language all day, 1 day; arithmetic all day, another day; speech all day, another, and geography all day for 2 days. As for lip reading—well, they had to read lips all the time anyway. His classmates were as much disappointed as he when I told him that I didn't think it would be practicable.

Before I go any further, there is one thing I want to emphasize, and that is, that I am not here to tell anybody how to teach geography. I shall try to give you, as best I can, an idea of the outline we use at present in our intermediate department and some of our methods of presenting various phases of it. Whether it will offer any suggestions to you, remains to be seen.

As the beginning work in geography must be local, of course the vocabulary taught at first will vary in different schools. The environs of our school in Philadelphia are very different from those of the Lexington Avenue School in New York, for example. To begin with, we have a campus and they haven't. So that is one word they don't need to teach immediately but we do.

No matter what outline is used in a school, it must be adapted to suit the needs of that particular school.

Doubtless some of you have heard the story of a young teacher who once taught at Mount Airy and then went to a school in another State. It might have been Maine or it might have been California, but it didn't happen to be either. And there she proceeded to teach the direction of Wissinoming Hall from Wingo-hocking Hall, two of our buildings.

PREPARATORY WORK

Before any formal geography work can be taught a certain amount of preparatory work must be given. This consists of language principles and question forms, necessary vocabulary, and classification along with nature study and topic work. Special articulation drills are necessary to procure correct pronunciation. It is a wise plan to have a regular period for these drills so that no time will be lost during the geography lesson.

(Miss Lamb here followed with a detailed exposition of the preparatory work necessary for a firm foundation upon which the later teaching of geography is to be built. The framework of this work is given herewith.)

I. Language principles:

1. The present tense
2. Parts of things
3. Comparison of adjectives
4. Duration of time
5. Question forms
6. Vocabulary:
 - (a) Parts of a house and surroundings
 - (b) The schoolhouse
 - (c) Rooms in the house
 - (d) The campus

I. Language principles—Continued.

6. Vocabulary—Continued.
 - (e) Woods adjoining the campus
 - (f) The park nearby
 - (g) Large estate in neighborhood
 - (h) Nature study
 - (i) Classification of nouns
 - (j) Occupations

FORMAL GEOGRAPHY

(In her treatment of Formal Geography, Miss Lamb dealt with the subject according to the following outline:)

- I. Direction.
- II. The campus.
- III. Location.
- IV. The locality (Mount Airy).
- V. The city (Philadelphia).
- VI. The State.
- VII. Neighboring States.
- VIII. The World.
- IX. North America.
- X. The United States.

TOPIC WORK

Topics may consist of accounts of experiences, excursions, descriptions, impersonations, and occupations.

The purpose of a topic is:

1. To teach new vocabulary.
2. To bring into use the new language forms that have been given.
3. To give information.
4. To teach classification.

Though an order is given, it must be left to the teacher to determine the time to present the subjects. She must also keep in mind the mental capacity of the pupils and make the lessons come within their range of comprehension.

Topics must be made seasonable.

(Miss Lamb then went on to give a detailed program of topic work for each grade in accordance with the above principles, correlating as closely as possible with the geography work. The presentation of the outline was closed with an explanation of the varied geography materials that may be employed to illustrate the work.)

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